

If you plan to submit a bid directly to the Department of Transportation

PREQUALIFICATION

Any contractor who desires to become pre-qualified to bid on work advertised by IDOT must submit the properly completed pre-qualification forms to the Bureau of Construction no later than 4:30 p.m. prevailing time twenty-one days prior to the letting of interest. This pre-qualification requirement applies to first time contractors, contractors renewing expired ratings, contractors maintaining continuous pre-qualification or contractors requesting revised ratings. To be eligible to bid, existing pre-qualification ratings must be effective through the date of letting.

REQUESTS FOR AUTHORIZATION TO BID

Contractors wanting to bid on items included in a particular letting must submit the properly completed "Request for Proposal Forms and Plans & Request for Authorization to Bid" (BDE 124) and the ORIGINAL "Affidavit of Availability" (BC 57) to the proper office no later than 4:30 p.m. prevailing time, three (3) days prior to the letting date.

WHO CAN BID ?

Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID: Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	Call
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

ADDENDUMS TO THE PROPOSAL FORMS

Planholders should verify that they have received and incorporated the revisions prior to submitting their bid. If plans/proposals were requested prior to the date of the addendum, an addendum package should have been mailed to the planholder. If plans/proposals were ordered after the date of the addendum, the plans/proposal package should already include all revisions and an identifying addendum sheet immediately after the proposal cover sheet. Failure by the bidder to include an addendum could result in a bid being rejected as irregular. If a planholder has not received an addendum within 5 days after the addendum date noted, they should call 217-782-7806.

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Proposal Submitted By

Name

Address

City

Letting April 26, 2002

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)**NOTICE TO PROSPECTIVE BIDDERS**

This proposal can be used for bidding purposes
by only those companies that request and receive
written AUTHORIZATION TO BID from IDOT's
Central Bureau of Construction.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

Notice To Bidders, Specifications, Proposal, Contract and Contract Bond



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- ☐ A Bid Bond is included.
- ☐ A Cashier's Check or a Certified Check is included

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

HOW MANY PROPOSALS SHOULD PROSPECTIVE BIDDERS REQUEST?: Prospective bidders should, prior to submitting their initial request for plans and proposals, determine their needs and request the total number of plans and proposals needed for each item requested. There will be a nonrefundable charge of \$15 for each set of plans and specifications issued.

WHO CAN BID?: Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Proposal Forms and Plans & Request for Authorization to Bid form (BDE 124) and submit an original Affidavit of Availability (BC 57).

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, they should contact the Central Bureau of Construction in advance of the letting date.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

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Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
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RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

for the improvement identified and advertised for bids in the Invitation for Bids as:

**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**

The work will consist of reconstructing the expansion joints at both pin and link locations with silicone joints, deck repairs, scarification of the deck and a microsilica concrete overlay on the structure carrying FAS Route 903 (CH 2) over FAI Route 57 just west of Johnson City.

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good and workmanlike manner as provided in the contract documents provided by the Department of Transportation. This proposal will become part of the contract and the terms and conditions contained in the contract documents shall govern performance and payments.

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.
4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.
5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

<u>Amount of Bid</u>			<u>Proposal Guaranty</u>	<u>Amount of Bid</u>			<u>Proposal Guaranty</u>
Up to		\$5,000.....	\$150	\$2,000,000	to	\$3,000,000	\$100,000
\$5,000	to	\$10,000.....	\$300	\$3,000,000	to	\$5,000,000	\$150,000
\$10,000	to	\$50,000.....	\$1,000	\$5,000,000	to	\$7,500,000	\$250,000
\$50,000	to	\$100,000.....	\$3,000	\$7,500,000	to	\$10,000,000	\$400,000
\$100,000	to	\$150,000.....	\$5,000	\$10,000,000	to	\$15,000,000	\$500,000
\$150,000	to	\$250,000.....	\$7,500	\$15,000,000	to	\$20,000,000	\$600,000
\$250,000	to	\$500,000.....	\$12,500	\$20,000,000	to	\$25,000,000	\$700,000
\$500,000	to	\$1,000,000.....	\$25,000	\$25,000,000	to	\$30,000,000	\$800,000
\$1,000,000	to	\$1,500,000.....	\$50,000	\$30,000,000	to	\$35,000,000	\$900,000
\$1,500,000	to	\$2,000,000.....	\$75,000	over		\$35,000,000	\$1,000,000

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

If a combination bid is submitted, the proposal guaranties which accompany the individual proposals making up the combination will be considered as also covering the combination bid.

The amount of the proposal guaranty check is _____ \$(_____). If this proposal is accepted and the undersigned shall fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty shall become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond shall become void or the proposal guaranty check shall be returned to the undersigned.

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual proposal. If the guaranty check is placed in another proposal, state below where it may be found.

The proposal guaranty check will be found in the proposal for: Item _____
 Section No. _____
 County _____

Mark the proposal cover sheet as to the type of proposal guaranty submitted.

BD 354 (Rev. 11/2001)

RETURN WITH BID

6. **COMBINATION BIDS.** The undersigned further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual proposal comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.

If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT
NUMBER -

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03/25/2002

98706

State Job # - C-99-037-01
PPS NBR - 9-99680-0000
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - BSMART FY2002-1

Project Number
SR-0903/212/000

Route
FAS 903

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
XZ193500	BR DK MIC C OVL 2 1/4	SQ YD	763.000				
X0301424	SILICONE JOINT SEALER	FOOT	72.000				
X0320887	POLYMER CONCRETE	CU FT	5.000				
X0321468	PLUG EX DK DRAINS	EACH	12.000				
X4066428	BC SC SUPER "D" N90	TON	39.000				
Z0002600	BAR SPLICERS	EACH	32.000				
Z0012200	CONC BR DECK SCAR 1/2	SQ YD	763.000				
Z0016001	DECK SLAB REP (FD-T1)	SQ YD	3.000				
Z0016002	DECK SLAB REP (FD-T2)	SQ YD	39.000				
Z0016200	DECK SLAB REP (PART)	SQ YD	104.000				
Z0047300	PROTECTIVE SHIELD	SQ YD	380.000				
Z0056200	SAND MOD IMP ATT REL	EACH	24.000				
Z0056400	SAND MOD IMP ATT TEMP	EACH	24.000				
40600100	BIT MATLS PR CT	GALLON	48.000				
40600980	BIT SURF REM BUTT JT	SQ YD	187.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT
NUMBER -

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98706

State Job # - C-99-037-01
PPS NBR - 9-99680-0000
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - BSMART FY2002-1

Project Number
SR-0903/212/000

Route
FAS 903

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
40600990	TEMPORARY RAMP	SQ YD	32.000				
50102400	CONC REM	CU YD	9.600				
50300255	CONC SUP-STR	CU YD	10.700				
50300260	BR DECK GROOVING	SQ YD	738.000				
50300300	PROTECTIVE COAT	SQ YD	790.000				
50300530	FLOOR DRAIN EXTENSION	EACH	10.000				
50800205	REINF BARS, EPOXY CTD	POUND	1,400.000				
67000400	ENGR FIELD OFFICE A	CAL MO	3.000				
67100100	MOBILIZATION	L SUM	1.000				
70100405	TRAF CONT-PROT 701321	EACH	1.000				
70100420	TRAF CONT-PROT 701411	EACH	1.000				
70100450	TRAF CONT-PROT 701201	L SUM	1.000				
70100700	TRAF CONT-PROT 701406	L SUM	1.000				
70106500	TEMP BR TRAF SIGNALS	EACH	1.000				
70300200	TEMP PAVT MARKING	FOOT	783.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT
NUMBER - 98706

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03/25/2002

State Job # - C-99-037-01
PPS NBR - 9-99680-0000
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - BSMART FY2002-1

Project Number
SR-0903/212/000

Route
FAS 903

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70301000	WORK ZONE PAVT MK REM	SQ FT	267.000				
70400100	TEMP CONC BARRIER	FOOT	390.000				
70400200	REL TEMP CONC BARRIER	FOOT	406.000				
70400300	TEMP CON BAR TERM SEC	EACH	2.000				
78001110	PAINT PVT MK LINE 4	FOOT	783.000				

NOTES:

1. Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.
2. The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY and the TOTAL PRICE.
3. If a UNIT PRICE is omitted, the TOTAL PRICE will be divided by the QUANTITY in order to establish a UNIT PRICE.
4. A bid may be declared UNACCEPTABLE if neither a unit price nor a total price is shown.

RETURN WITH BID

STATE REQUIRED ETHICAL STANDARDS GOVERNING CONTRACT PROCUREMENT: ASSURANCES, CERTIFICATIONS AND DISCLOSURES

I. GENERAL

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. By execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances has been read and understood, that each certification is made and understood, and that each disclosure requirement has been understood and completed.

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

A. The assurances hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

B. Felons

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any state agency from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois Toll Highway Authority, or who is the spouse or minor child of any such person to have or acquire any contract, or any direct pecuniary interest in any contract therein, whether for stationery, printing, paper, or any services, materials, or supplies, that will be wholly or partially satisfied by the payment of funds appropriated by the General Assembly of the State of Illinois or in any contract of the Capital Development Board or the Illinois Toll Highway authority.

(b) Interests. It is unlawful for any firm, partnership, association or corporation, in which any person listed in subsection (a) is entitled to receive (i) more than 7 1/2% of the total distributable income or (ii) an amount in excess of the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(c) Combined interests. It is unlawful for any firm, partnership, association, or corporation, in which any person listed in subsection (a) together with his or her spouse or minor children is entitled to receive (i) more than 15%, in the aggregate, of the total distributable income or (ii) an amount in excess of 2 times the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(d) Securities. Nothing in this Section invalidates the provisions of any bond or other security previously offered or to be offered for sale or sold by or for the State of Illinois.

(e) Prior interests. This Section does not affect the validity of any contract made between the State and an officer or employee of the State or member of the General Assembly, his or her spouse, minor child or any combination of those persons if that contract was in existence before his or her election or employment as an officer, member, or employee. The contract is voidable, however, if it cannot be completed within 365 days after the officer, member, or employee takes office or is employed.

The current salary of the Governor is \$150,700.00. Sixty percent of the salary is \$90,420.00.

RETURN WITH BID

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

(a) It is unlawful for any person employed in or on a continual contractual relationship with any of the offices or agencies of State government to participate in contract negotiations on behalf of that office or agency with any firm, partnership, association, or corporation with whom that person has a contract for future employment or is negotiating concerning possible future employment.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-15, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

E. Inducements

1. The Illinois Procurement Code provides:

Section 50-25. Inducement. Any person who offers or pays any money or other valuable thing to any person to induce him or her not to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-25, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, associate procurement officers, State purchasing officers, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-30, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

2. The bidder assures the Department that it has not failed to report any relevant facts concerning the practices addressed in Section 50-40 which may involve the contract for which the bid is submitted.

H. Confidentiality

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

2. The bidder assures the Department that it has no knowledge of any fact relevant to the practices addressed in Section 50-45 which may involve the contract for which the bid is submitted.

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

Section 50-50. Insider information. It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

2. The bidder assures the Department that it has no knowledge of any facts relevant to the practices addressed in Section 50-50 which may involve the contract for which the bid is submitted.

III. CERTIFICATIONS

A. The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

- (a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

- (1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

- (2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

- (b) Businesses. No business shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

- (1) the business has been finally adjudicated not guilty; or

- (2) the business demonstrates to the governmental entity with which it seeks to contract, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

- (c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

- (d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The bidder certifies that it is not barred from being awarded a contract under Section 50.5.

C. Educational Loan

1. Section 3 of the Educational Loan Default Act provides:

§ 3. No State agency shall contract with an individual for goods or services if that individual is in default, as defined in Section 2 of this Act, on an educational loan. Any contract used by any State agency shall include a statement certifying that the individual is not in default on an educational loan as provided in this Section.

2. The bidder, if an individual as opposed to a corporation, partnership or other form of business organization, certifies that the bidder is not in default on an educational loan as provided in Section 3 of the Act.

D. Bid-Rigging/Bid Rotating

1. Section 33E-11 of the Criminal Code of 1961 provides:

§ 33E-11. (a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article. The State and units of local government shall provide the appropriate forms for such certification.

RETURN WITH BID

(b) A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

2. The bidder certifies that it is not barred from contracting with the Department by reason of a violation of either Section 33E-3 or Section 33E-4.

E. International Anti-Boycott

1. Section 5 of the International Anti-Boycott Certification Act provides:

§ 5. State contracts. Every contract entered into by the State of Illinois for the manufacture, furnishing, or purchasing of supplies, material, or equipment or for the furnishing of work, labor, or services, in an amount exceeding the threshold for small purchases according to the purchasing laws of this State or \$10,000.00, whichever is less, shall contain certification, as a material condition of the contract, by which the contractor agrees that neither the contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

2. The bidder makes the certification set forth in Section 5 of the Act.

F. Drug Free Workplace

1. The Illinois "Drug Free Workplace Act" applies to this contract and it is necessary to comply with the provisions of the "Act" if the contractor is a corporation, partnership, or other entity (including a sole proprietorship) which has 25 or more employees.

2. The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor's workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about the dangers of drug abuse in the workplace; the contractor's policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

(c) Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.

(d) Notifying the Department within ten (10) days after receiving notice from an employee or otherwise receiving actual notice of the conviction of an employee for a violation of any criminal drug statute occurring in the workplace.

(e) Imposing or requiring, within 30 days after receiving notice from an employee of a conviction or actual notice of such a conviction, an appropriate personnel action, up to and including termination, or the satisfactory participation in a drug abuse assistance or rehabilitation program approved by a federal, state or local health, law enforcement or other appropriate agency.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of the actions and efforts stated in this certification.

TO BE RETURNED WITH BID

IV. DISCLOSURES

A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

Form A: For bidders that have previously submitted the information requested in Form A

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.

(Bidding Company)

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

Form A: For bidders who have NOT previously submitted the information requested in Form A

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the **NOT APPLICABLE STATEMENT** on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than \$90,420.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$90,420.00 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES ___ NO ___
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than \$90,420.00? YES ___ NO ___

(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The bidder must determine each individual in the bidding entity or the bidding entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable.** The person signing can be, but does not have to be, the person for which the form is being completed. The bidder is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the **NOT APPLICABLE STATEMENT** on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

Form B: Identifying Other Contracts & Procurement Related Information Disclosure Form B must be completed for each bid submitted by the bidding entity. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the **NOT APPLICABLE STATEMENT** on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

The Bidder shall identify, by checking Yes or No on Form B, whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the bidder only needs to complete the signature box on the bottom of Form B. If "Yes" is checked, the bidder must do one of the following:

Option I: If the bidder did not submit an Affidavit of Availability to obtain authorization to bid, the bidder must list all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Do not include IDOT contracts. Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included. Bidders who submit Affidavits of Availability are suggested to use Option II.

Option II: If the bidder is required and has submitted an Affidavit of Availability in order to obtain authorization to bid, the bidder may write or type "See Affidavit of Availability" which indicates that the Affidavit of Availability is incorporated by reference and includes all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. For any contracts that are not covered by the Affidavit of Availability, the bidder must identify them on Form B or on an attached sheet(s). These might be such things as leases.

D. Bidders Submitting More Than One Bid

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item _____ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$10,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than \$90,420.00 (60% of the Governor's salary as of 7/1/01). **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):
% or \$ value of ownership/distributable income share: _____

2. Disclosure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

(a) State employment, currently or in the previous 3 years, including contractual employment of services.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name the State agency for which you are employed and your annual salary. _____

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years. Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___ No ___

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government. Yes ___ No ___

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(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes ___ No ___

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes ___ No ___

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.

Completed by:

Name of Authorized Representative (type or print)

Completed by:

Title of Authorized Representative (type or print)

Completed by:

Signature of Individual or Authorized Representative

Date

NOT APPLICABLE STATEMENT

I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.

This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

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**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form B
Other Contracts &
Procurement Related Information
Disclosure**

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$10,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No ___

If “No” is checked, the bidder only needs to complete the signature box on the bottom of this page.

2. If “Yes” is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE SIGNED

Name of Authorized Representative (type or print)	

Title of Authorized Representative (type or print)	
_____	_____
Signature of Authorized Representative	Date

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SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights' Rules and Regulations are applicable to bidders on all construction contracts advertised by the Illinois Department of Transportation:

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

- B. Included in "Total Employees" under Table A is the total number of **new hires** that would be employed in the event the undersigned bidder is awarded this contract.

The undersigned bidder projects that: (number) _____ new hires would be recruited from the area in which the contract project is located; and/or (number) _____ new hires would be recruited from the area in which the bidder's principal office or base of operation is located.

- C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed directly by the undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.

The undersigned bidder estimates that (number) _____ persons will be directly employed by the prime contractor and that (number) _____ persons will be employed by subcontractors.

PART III. AFFIRMATIVE ACTION PLAN

- A. The undersigned bidder understands and agrees that in the event the foregoing minority and female employee utilization projection included under **PART II** is determined to be an underutilization of minority persons or women in any job category, and in the event that the undersigned bidder is awarded this contract, he/she will, prior to commencement of work, develop and submit a written Affirmative Action Plan including a specific timetable (geared to the completion stages of the contract) whereby deficiencies in minority and/or female employee utilization are corrected. Such Affirmative Action Plan will be subject to approval by the contracting agency and the **Department of Human Rights**.
- B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____

Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required.

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

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ADDITIONAL FEDERAL REQUIREMENTS

In addition to the Required Contract Provisions for Federal-Aid Construction Contracts (FHWA 1273), all bidders make the following certifications.

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

RETURN WITH BID**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL)

Firm Name _____

Signature of Owner _____

Business Address _____

(IF A CO-PARTNERSHIP)

Firm Name _____

By _____

Business Address _____

Name and Address of All Members of the Firm:

(IF A CORPORATION)

Corporate Name _____

By _____

Signature of Authorized Representative _____

Typed or printed name and title of Authorized Representative _____

Attest _____

Signature _____

(IF A JOINT VENTURE, USE THIS SECTION
FOR THE MANAGING PARTY AND THE
SECOND PARTY SHOULD SIGN BELOW)

Business Address _____

(IF A JOINT VENTURE)

Corporate Name _____

By _____

Signature of Authorized Representative _____

Typed or printed name and title of Authorized Representative _____

Attest _____

Signature _____

Business Address _____

If more than two parties are in the joint venture, please attach an additional signature sheet.

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Illinois Department of Transportation

Division of Highways Proposal Bid Bond (Effective November 1, 1992)

Item No. _____
Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, That Whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ day of _____ A.D., _____.

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By: _____
(Signature & Title)

By: _____
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF _____

I, _____, a Notary Public in and for said County, do hereby certify that _____ and _____

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____, A.D. _____.

My commission expires _____
Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing below the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

Electronic Bid Bond ID#

Company/Bidder Name

Signature and Title

PROPOSAL ENVELOPE



PROPOSALS

for construction work advertised for bids by the
Illinois Department of Transportation

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

Bidders should use an IDOT proposal envelope or affix this form to the front of a 10" x 13" envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 323
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**



Illinois Department of Transportation



1. TIME AND PLACE OF OPENING BIDS. Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., April 26, 2002. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.

2. DESCRIPTION OF WORK. The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 98706
Williamson County
Section BSMART FY2002-1
Project SR-903(212)
FAS Route 903
District 9 Construction Funds**

The work will consist of reconstructing the expansion joints at both pin and link locations with silicone joints, deck repairs, scarification of the deck and a microsilica concrete overlay on the structure carrying FAS Route 903 (CH 2) over FAI Route 57 just west of Johnson City.

3. INSTRUCTIONS TO BIDDERS. (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. AWARD CRITERIA AND REJECTION OF BIDS. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Kirk Brown, Secretary

BD 351 (Rev. 11/2001)

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2002

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS and LOCAL AGENCY SPECIAL PROVISIONS.

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page
No.

No Supplemental Specifications this year.
RECURRING SPECIAL PROVISIONS

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAS 903 (CH 2), Project SR-903(212), BSMART FY 2002-2, Williamson County and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

ROUTE: FAS 903 (CH 2)

SECTION: BSMART FY 2002-1

COUNTY: Williamson

CONTRACT: 98706

LOCATION OF PROJECT

The proposed improvement is on SN 100-0040 over I-57, just west of Johnson City on FAS Route 903 (C.H. 2). Total Length of the project is 348.021 feet. Traffic will be maintained during the improvement via staged construction.

DESCRIPTION OF PROJECT

The proposed improvement for SN 100-0040 will consist of reconstructing the expansion joints at both pin & link locations with silicone joints, the existing deck will be repaired with full depth and partial depth patching, 1/2" scarification of the deck, a 2.25" microsilica concrete overlay, and extending and eliminating drains.

UTILITIES

Effective 1984 Revised 1/2/97
9-105D3-97

No utilities should be encountered within the limits of this project. Verification of this will be the responsibility of the Contractor.

Additional utility information may be obtained by calling the "Joint Utility Location Information for Excavators" phone number 1-800-892-0123. The Project is located in Herrin Township.

TRAFFIC CONTROL PLAN

Effective 1985 Revised 2/17/99

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications, the Supplemental Specifications, the National Manual on Uniform Traffic Control Devices for Streets and Highways, the Supplemental Specifications, these Special Provisions, and any special details and Highway Standards contained herein and in the plans.

Special attention is called to Article 107.09 and 107.14 of the Standard Specifications for Road and Bridge Construction and the following traffic control related (1) Highway Standards; (2) Supplemental Specifications and Recurring Special Provisions; and (3) other Special Provisions which are included in this contract:

1. Standards: 701011, 701201, 701321, 701406, 701411, and 702001.
2. Supplemental Specifications and Recurring Special Provisions:
3. Special Provisions:
 - Traffic Control Deficiency Deduction
 - Relocate Temporary Concrete Barrier

Traffic control standards shall be applied as directed by the Engineer. Suggested applications for each standard are as follows:

- | | |
|---------------|---|
| <u>701011</u> | This standard should be used when the Contractor's work is confined to the shoulder such as stringing guardrail posts and rail. |
| <u>701201</u> | This standard should be used when the Contractor's work encroaches in the area between the center line and a line 24" outside the edge of pavement. |
| <u>701321</u> | This standard should be used when the road is limited to one-lane traffic for staged bridge repairs and concrete median barrier is required. |
| <u>701406</u> | This standard should be used when at any time, any vehicle, equipment, workers or their activities will encroach on the lane adjacent to the shoulder, or on the shoulder within 60 mm (24") of the edge of pavement. This standard also applies when work is being performed in the left lane. |

701411 This standard should be used where, at any time any vehicle, equipment, workers, or their activities require a lane closure in close proximity of an exit or entrance ramp and supplements other traffic control standards for lane closures. This standard also applies when work is being performed in the left lanes and the ramps enter and exit on the left.

During the entire construction period, the road shall be kept open to traffic as follows:

- (a) Over one lane of the existing bridge during construction of the opposite lane of the structure
- (b) The highway shall be kept open to at least one lane of traffic at all times, and two lanes of traffic to the greatest extent possible.
- (c) On the new work during Stage II Construction of the new structure.
- (d) Access to all public roads and private entrances shall be maintained during all stages of the work.

If at any time the signs are in place but not applicable, they shall be turned from the view motorists or covered as directed by the Engineer.

The Contractor shall give IDOT Bureau of Operations two weeks notice before implementing any traffic restrictions.

PLUG EXISTING DECK DRAINS

Effective November 6, 1996

Revised: April 7, 1998

Description. This work consists of the satisfactory plugging of the existing bridge floor drains at locations as detailed in the plans.

Construction Requirements. The threaded rod, nuts and washers shall be galvanized according to AASHTO M 232. The material used to plug the drains shall be Class BD concrete and shall be placed according to Section 503 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price each for Plug Existing Floor Drains, which price shall include all material and labor to satisfactory complete the work.

TEMPORARY CONCRETE BARRIER RELOCATION

This item shall be performed in accordance with the plans, the applicable portions of Section 704 of the Standard Specifications, and as specified herein.

The Contractor shall plan the operations involved in removing and relocating the temporary concrete barrier so as to minimize the period when the work zone will be unprotected; and to assure that, in the opinion of the Engineer, sufficient barrier will be in place at the end of each work day to shield traffic from all hazards. During the relocation operations, cones, drums or barricades shall be placed at 3 meter (10 foot) centers across all gaps in the barrier.

Prior to the relocation of the temporary concrete barrier from its initial location, the Contractor shall submit and obtain the Engineer's approval of a work plan in writing for relocating the barrier which will meet the above requirements. The Engineer may require the Contractor to first furnish and install separate additional temporary concrete barrier of sufficient length to assure that the remaining needed barrier can be relocated from the initial installation in one daylight period.

Any additional barrier which must be furnished shall be paid for at the contract unit price per foot for RELOCATE TEMPORARY CONCRETE BARRIER. The cost per unit price shall include storage of the barrier during the period of 10/15/02 to 4/01/03. The location of storage shall be approved by the engineer. No additional compensation will be allowed on account of the above requirements.

PREPARATION OF AGGREGATES

Effective 1985
9-406MT2-85

Add the following to the second paragraph of Article 406.09:

The maximum allowable moisture in any one hot bin shall be 0.3% by weight for batch type plants and for continuous mix plants. For drum mixing plants, the limitation shall be 0.5% moisture in the mixture as discharged from the drum.

FLOOR DRAIN EXTENSION

Effective: February 1, 1996
Revised: April 7, 1998

Description. This work consists of the furnishing and installing extensions on the existing bridge deck drains at locations and as detailed on the plans and as directed by the Engineer.

Construction Requirements. The drains shall be fabricated from material as shown on the plans and is to be bent and/or formed according to the dimensions as shown on the plans. The Contractor shall verify all plan dimensions prior to fabrication of the extensions. The extensions shall be braced as shown on the plans and the cost of all supporting members shall be included in the cost of FLOOR DRAIN EXTENSIONS.

Basis of Payment. This work will be paid for at the contract unit price Each for FLOOR DRAIN EXTENSIONS, which price shall include all material and labor to satisfactorily complete the work.

BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2 1/4"

The final cleaning method to be used prior to overlay placement and surface pull-off testing shall be the shotblasting method. The cost of these requirements shall be included in the cost of the BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2 1/4".

DECK SLAB REPAIR

Effective: May 15, 1995

Revised: January 1, 2002

This work shall consist of bituminous surface removal, when required, the removal and disposal of all loose and deteriorated concrete from bridge deck and the replacement with new concrete to the original top of deck. The work shall be done according to the applicable requirements of Sections 501, 503 and 1020 of the Standard Specifications and this Special Provision.

Deck slab repairs will be classified as follows:

- (a) Partial-Depth. Partial-depth repairs shall consist of removing the loose and unsound deck concrete, disposing of the concrete removed and replacing with new concrete. The removal may be performed by chipping with power driven hand tools or by hydro-scarification equipment. The depth shall be measured from the top of the concrete deck surface, at least 20 mm (3/4 in.) but not more than 1/2 the concrete deck thickness.
- (b) Full-Depth. Full-depth repairs shall consist of removing concrete full-depth of the deck, disposing of the concrete removed, and replacing with new concrete to the original concrete deck surface. The removal may be performed with power driven hand tools or by hydro-scarification equipment. Full-depth repairs shall be classified for payment as Full-Depth, Type I and Full-Depth, Type II according to the following:

Type I Full-depth patches less than or equal to 0.5 sq m (5 sq ft) in area. The minimum dimensions for a patch shall be 300 mm x 300 mm (1 ft X 1 ft).

Type II Full-depth patches greater than 0.5 sq m (5 sq ft) in area.

Materials.

Materials shall be according to Article 1020.02.

Portland cement concrete for partial and full-depth repairs shall be according to Section 1020. Class PP-1, PP-2, PP-3, or PP-4 concrete shall be used at the Contractor's option.

Grout. The grout for bonding new concrete to old concrete shall be proportioned by mass (weight) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and one part sand, mixed with sufficient water to form a slurry. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than two hours old shall not be used.

Equipment:

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

- (a) Surface Preparation Equipment. Surface preparation and concrete removal equipment shall be according to the applicable portions of Section 1100 and the following:
 - (1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
 - (2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, shotblasting or abrasive blasting. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars, and shall have oil traps.
 - (3) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 20 kg. (45 lb) class. Chipping hammers heavier than a nominal 6.8 kg. (15 lb) class shall not be used for removing concrete from below any reinforcing bar for partial depth repairs or final removal at the boundary of full-depth repairs. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.
 - (4) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment may use river, stream or lake water. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and removing rust and concrete particles from exposed reinforcing bars. Hydro-scarification equipment shall be calibrated before being used and shall operate at a minimum of 124 MPa (18,000 psi).
- (b) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.
- (c) Finishing Equipment: Finishing equipment shall be according to Article 1103.17. Adequate hand tools will be permitted for placing and consolidating concrete in the patch areas and for finishing small patches.

Construction Requirements:

- (a) Bituminous Surface Removal.

The bituminous concrete surface course and all waterproofing membrane shall be removed and disposed of according to applicable portions of Articles 440.03 and 440.06, except milling equipment will not be allowed if the deck is to receive a waterproofing membrane system. If the overlay or waterproofing membrane contains asbestos fibers, removal shall be in accordance with the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal". Removal of the bituminous surface by the use of radiant or direct heat will not be permitted.

(b) Surface Preparation:

All loose, disintegrated and unsound concrete shall be removed from portions of the deck slab shown on the plans or as designated by the Engineer. The Engineer will determine the limits of removal as the work progresses.

If the Contractor elects to use hydro-scarification equipment, he/she shall be responsible for collecting and properly disposing of the runoff water generated. Runoff water will not be allowed to constitute a hazard on adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

- (1) Partial-Depth. Areas to be repaired will be determined and marked by the Engineer. A concrete saw shall be used to provide vertical edges approximately 20 mm (3/4 in.) deep around the perimeter of the area to be patched when an overlay is not specified. Where high steel is present, the depth may be reduced as directed by the Engineer. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-scarification.

The loose and unsound concrete shall be removed by chipping, with power driven hand tools or by hydro-scarification equipment. All exposed reinforcing bars and newly exposed concrete shall be thoroughly blast cleaned. Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A minimum of 25 mm (1 in.) clearance will be required. The Engineer may require enlarging a designated removal area should inspection indicate deterioration beyond the limits previously designated. In this event, a new saw cut shall be made around the extended area before additional removal is begun. The removal area shall not be enlarged solely to correct debonded reinforcement or deficient lap lengths.

- (2) Full-Depth. Concrete shall be removed as determined by the Engineer within all areas designated for full-depth repair and in all designated areas of partial depth repair in which unsound concrete is found to extend below half the concrete deck thickness. Full depth removal shall be performed according to Article 501.03. Saw cuts shall be made on the top of the deck, except those boundaries along the face of curbs, parapets and joints or where hydro-scarification provided sharp vertical edges. The top saw cut may be omitted if the deck is to receive an overlay.

Forms for full-depth repair may be supported by hangers with adjustable bolts or by blocking from the beams below. When approved by the Engineer, forms for Type 1 patches may be supported by No. 9 wires or other devices attached to the reinforcement bars.

All form work shall be removed after the curing sequence is complete and prior to opening to traffic.

- (3) Reinforcement Treatment. Care shall be exercised during concrete removal to protect the reinforcement bars and structural steel from damage. Any damage to the reinforcement bars or structural steel to remain in place shall be repaired or replaced to the satisfaction of the Engineer at the Contractor's expense. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Reinforcing bars which have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved "squeeze type" mechanical bar splice capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted.
- (4) Cleaning. Immediately after completion of the concrete removal and reinforcement repairs, the repair areas shall be cleaned of dust and debris. Once the initial cleaning is completed, the repair areas shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Particular attention shall be given to removal of concrete fines. Any method of cleaning which does not consistently produce satisfactory results shall be discontinued and replaced by an acceptable method. All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

(c) Placement & Finishing of Concrete Repair:

- (1) Grout Placement. After the repair areas have been cleaned and immediately prior to concrete placement, the grout shall be applied to a dampened surface. A thin layer of grout shall be thoroughly scrubbed into the deck surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with concrete. Grout that has become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

(2) Concrete Placement.

The concrete shall be placed and consolidated according to Article 503.07 and as herein specified. Article 1020.14 (b) shall apply, except for the requirement to use an approved retarding admixture when the plastic concrete reaches 30°C (85°F).

When an overlay system is not specified, the patches shall be finished according to Article 503.17 (c)(2)a., followed by a light brooming.

(d) Curing and Protection.

Concrete patches shall be cured by the Wetted Burlap Method according to Article 1020.13 (a)(3), and the curing period shall be 72 hours. In addition to Article 1020.13, when the air temperature is less than 13° C (55° F), the Contractor shall cover the patch with minimum R12 insulation. Insulation is optional when the air temperature is 13° C - 32° C (55° F. - 90° F). Insulation shall not be placed when the air temperature is greater than 32° C (90° F). A 72-hour minimum drying period shall be required before placing waterproofing or bituminous surfacing.

(e) Opening to Traffic.

No traffic will be permitted on a patch until after the specified cure period, and the concrete has obtained a minimum compressive strength of 27.6 MPa (4000 psi) or flexural strength of 4.65 MPa (675 psi).

Construction equipment will be permitted on a patch during the cure period if the concrete has obtained the minimum required strength. In this instance, the strength specimens shall be cured with the patch.

Method of Measurement.

When specified, bituminous surface removal and full or partial depth repairs will be measured for payment and computed in square meters (square yards).

Basis of Payment.

The bituminous concrete surface removal will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE REMOVAL (DECK). Areas removed and replaced up to and including a depth of half the concrete deck thickness will be paid for at the contract unit price per square meter (square yard) for DECK SLAB REPAIR (PARTIAL). Areas requiring removal greater than a depth of half the concrete deck thickness shall be removed and replaced full depth and will be paid for at the contract unit price per square meter (square yard) for DECK SLAB REPAIR (FULL DEPTH, TYPE I) and/or DECK SLAB REPAIR (FULL DEPTH, TYPE II).

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

Removal and disposal of asbestos waterproofing and/or asbestos bituminous concrete will be paid for as specified in the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal".

BRIDGE DECK MICROSILICA CONCRETE OVERLAY

Effective: May 15, 1995

Revised: January 1, 2002

Description. This work shall consist of the preparation of the existing concrete bridge deck and the construction of a microsilica concrete overlay to the specified thickness. The minimum thickness of the overlay shall be 60 mm (2 1/4 in.).

Materials. Materials shall meet the requirements of the following Articles of Section 1000:

<u>Item</u>	<u>Article/Section</u>
(a) Microsilica	1014
(b) Portland Cement Concrete (Notes 1-6)	1020
(c) Grout (Note 7)	
(d) Rapid Set Materials (Note 8)	

Note 1: Cement shall be Type I portland cement. Fine aggregate shall be natural sand and the coarse aggregate shall be crushed stone or crushed gravel. The gradation of the coarse aggregate shall be CA 11, CA 13, CA 14 or CA 16.

Note 2: Mix Design Criteria.

Article 1020.04 shall not apply. The microsilica concrete mix design shall meet the following requirements:

Cement Factor	335 kg/cu m (565 lb/cu yd)
Microsilica Solids	20 kg/cu m (33 lb/cu yd)
Water/Cement Ratio (including water in the slurry)	0.37 to 0.41
Mortar Factor	0.88 to 0.92
Slump	75 to 150 mm (3 to 6 in.)
Air Content	5 to 9 percent
Compressive Strength (14 days)	27.6 MPa (4000 psi) minimum

Note 3: Admixtures.

Article 1020.05(b) shall apply except as follows:

High-range water reducing admixtures (superplasticizers) shall be added as determined by the Engineer.

Note 4: Fly Ash.

Article 1020.05(c) shall apply except as follows:

Only Class C fly ash may be used to partially replace portland cement. The amount of cement replaced and replacement ratio shall be the same as for bridge decks.

Note 5: Ground Granulated Blast-Furnace Slag. |

Ground granulated blast-furnace slag shall not be used.

Note 6: Mixing. |

The mixing requirements shall be according to Article 1020.11(d), except as follows:

(a) Water-based slurries:

(1) Truck Mixer:

- Combine simultaneously air entrainment, water reducers and/or retarders, slurry and 80 percent of the water with cement, fly ash and aggregates. |
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add superplasticizers.
- Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

- Slurry shall be diluted into the water stream or weigh box prior to adding into mixer. Combine simultaneously air entrainment, water reducers and/or retarders, slurry and 80 percent of the water with cement, fly ash and aggregates. |
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add superplasticizers.
- Mix 60-70 revolutions at 12-15 RPM.

(b) Densified microsilica (bulk):

(1) Truck Mixer:

- Same as (a)1 above except the densified microsilica shall be added with the cement.

(2) Stationary mixer:

- Same as (a)2 above except the densified microsilica shall be added with the cement.

(c) Densified microsilica (bag):

Bagged microsilica shall be kept dry. No bag or material containing moisture shall be introduced into the concrete mixer.

(1) Truck Mixer:

- Combine air entrainment, water reducers and/or retarders and 80 percent of the water.
- Add cement, fly ash, and aggregates.
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add microsilica.
- Mix 70-80 revolutions at 12-15 RPM.
- Add superplasticizers.
- Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary mixer:

- Combine air entrainment, water reducers and/or retarders and 80 percent of the water.
- Add cement, fly ash, and aggregates.
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add microsilica to truck.
- Mix 70-80 revolutions at 12-15 RPM.
- Add superplasticizers.
- Mix 60-70 revolutions at 12-15 RPM.

Note 7: Grout. The grout for bonding new concrete to old concrete shall be proportioned by mass (weight) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and two parts sand, mixed with sufficient water to form a slurry. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than two hours old shall not be used.

At the option of the Contractor the grout may be applied by mechanical applicators. If this option is chosen, the sand shall be eliminated from the grout mix.

Note 8: Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs.

Equipment: The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) Surface Preparation Equipment. Surface preparation equipment shall be according to the applicable portions of Section 1100 and the following:

(1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

- (2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, shotblasting or abrasive blasting. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars, and shall have oil traps.

If mechanical scarification is used as the bridge deck scarification method, high-pressure waterblasting equipment shall have a minimum pressure of 48 MPa (7,000 psi).

- (3) Mechanical Scarifying Equipment. Scarifying equipment shall be a power-operated, mechanical scarifier capable of uniformly scarifying or removing the old concrete surface and new patches to the depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and they can be demonstrated to the satisfaction of the Engineer.

- (4) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment may use river, stream or lake water. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and removing rust and concrete particles from exposed reinforcement bars. The hydro-scarification equipment shall be calibrated before being used and shall operate at a minimum of 124 MPa (18,000 psi).

- (5) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 20 kg. (45 lb) class. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.

- (b) Pull-off Test Equipment. Equipment used to perform pull-off testing shall be either approved by the Engineer, or obtained from one of the following approved sources:

James Equipment
007 Bond Tester
800-426-6500

Germann Instruments, Inc.
BOND-TEST Pull-off System
847-329-9999

SDS Company
DYNA Pull-off Tester
805-238-3229

Pull-off test equipment shall include all miscellaneous equipment and materials to perform the test and clean the equipment, as indicated in the Illinois Pull-off Test (Surface or Overlay Method). Prior to the start of testing, the Contractor shall submit to the Engineer a technical data sheet and material safety data sheet for the epoxy used to perform the testing. For solvents used to clean the equipment, a material safety data sheet shall be submitted.

- (c) Concrete Equipment. Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

(d) Finishing Equipment. Finishing equipment shall be according to Article 503.03.

(e) Fogging Equipment. Fogging equipment shall consist of a mechanically operated pressurized system using a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete. The fogging equipment shall be mounted on either the finishing equipment or a separate work bridge behind the finishing equipment. Controls shall be designed to vary the volume of water flow, shall be easily accessible, and shall immediately shut off the water when in the off position. Hand-held fogging equipment will not be allowed.

Construction Requirements: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall be protected from damage during scarification and cleaning operations. All damage caused by the Contractor shall be corrected, at the Contractor's expense, to the satisfaction of the Engineer.

(a) Deck Preparation:

(1) Bridge Deck Scarification. Prior to scarification, all designated full and partial depth patching shall be completed according to the Special Provision for "Deck Slab Repair".

When allowed by the Engineer, the Contractor may perform the scarification operation prior to the partial and/or full depth patching provided that all patches are scarified after the patch has cured to provide a rough texture suitable for bonding to the hard overlay.

The scarification work shall consist of removing the designated concrete deck surface using a scarifying machine or hydro-scarifying equipment. In areas of the deck not accessible to the scarifying equipment, power-driven hand tools will be permitted.

A trial section on the existing deck surface will be designated by the Engineer to demonstrate that the equipment, personnel and methods of operation are capable of producing results satisfactory to the Engineer. The trial section will consist of approximately 3 sq m (30 sq ft).

Once the settings are established, they shall not be changed without the permission of the Engineer. If concrete is being removed below the desired depth, the equipment shall be reset or recalibrated.

If the Contractor elects to use hydro-scarification, the Contractor shall collect and properly dispose of the runoff water generated by the hydro-scarification operation according to Article 202.03.

All areas designated to be scarified shall be scarified uniformly to the depth as specified on the plans, but not to exceed 25 mm (1 in.). Concrete removal below the specified depth shall be replaced at the Contractors expense, to the satisfaction of the Engineer. Power driven hand tools shall be used for removal around areas to remain in place.

After scarification, the deck shall be thoroughly cleaned of broken concrete and other debris and the entire scarified area will be sounded by the Engineer. All remaining unsound areas will be marked for additional repairs. The Contractor shall perform these repairs according to the Special Provision for "Deck Slab Repair" except the additional partial depth areas removed shall be filled with overlay material poured monolithically with the overlay.

- (2) Final Cleaning. Immediately after completion of the scarification and additional deck slab repairs, the deck shall be cleaned of dust, debris, and concrete fines. After initial cleaning is completed, the deck shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Blast cleaning shall also include vertical faces of curbs, previously placed adjacent overlays, barrier walls up to a height of 25 mm (1 in.) above the overlay, depressions and beneath reinforcement bars.

If the Contractor elects to use mechanical scarification, surface pull-off testing will be required after final cleaning. Before placement of the overlay, the existing deck surface will be tested by the Engineer according to the Illinois Pull-off Test (Surface Method). The Contractor shall provide the test equipment.

- a. Start-up Testing. Prior to the first overlay placement, the Engineer will evaluate the blast cleaning method. The start-up area shall be a minimum of 56 sq m (600 sq ft). After the area has been prepared, six random test locations will be determined by the Engineer, and tested according to the Illinois Pull-off Test (Surface Method).

The average of the six tests shall be a minimum of 1,207 kPa (175 psi) and each individual test shall have a minimum strength of 1,103 kPa (160 psi). If the criteria are not met, the Contractor shall adjust the blast cleaning method. Start-up testing will be repeated until satisfactory results are attained.

Once an acceptable cleaning method is established, it shall be continued for the balance of the work. The Contractor may, with the permission of the Engineer, change the blast cleaning method, in which case, additional start-up testing will be required.

- b. Lot Testing. After start-up testing has been completed, the following testing frequency will be used. For each structure, each stage will be divided into lots of not more than 420 sq m (4500 sq ft). Three random test locations will be determined by the Engineer for each lot, and tested according to the Illinois Pull-off Test (Surface Method).

The average of the three tests shall be a minimum of 1,207 kPa (175 psi) and each individual test shall have a minimum strength of 1,103 kPa (160 psi). In the case of a failing individual test or a failing average of three tests, the Engineer will determine the area that requires additional blast cleaning by the Contractor. Additional test locations will be determined by the Engineer.

All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, and other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

- (b) Pre-placement Procedure. Prior to placing the overlay, the Engineer will inspect the deck surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.

Before placing the overlay, the finishing machine shall be operated over the full length of bridge segment to be overlaid to check support rails for deflection and confirm the minimum overlay thickness. All necessary adjustments shall be made and another check performed, unless otherwise directed by the Engineer.

- (c) Placement Procedure:

- (1) Final Surface Preparation. The Contractor shall prepare the deck prior to overlay placement by one of the following methods unless restricted as specified on the plans:

- a. Grout Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the grout is started. Any excess water shall be removed by compressed air or by vacuuming prior to grout placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the grout. Immediately before placing the overlay mixture, the exposed area shall be thoroughly covered with a thin layer of grout. The grout shall be thoroughly scrubbed into the surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with the concrete.

Grout that is allowed to become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

- b. Direct Bond Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the overlay. Any excess water shall be removed by compressed air or by vacuuming prior to beginning overlay placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the overlay.

- (2) Overlay Placement. For the overlay pour, fogging equipment shall be present and in working condition. Fogging equipment shall be in operation unless the evaporation rate is less than 0.5 kg/sq m/hr (0.1 lb/sq ft/hr), and the Engineer gives permission to turn off the equipment. The evaporation rate shall be determined according to the Figure in the Portland Cement Association's publication titled "Design and Control of Concrete Mixtures." Refer to the section on plastic shrinkage cracking. The publication is provided in the Portland Cement Concrete Level I Technician Course, or can be obtained from the Portland Cement Association.

The fogging equipment controls shall be adjusted to ensure adequate coverage of the fog mist.

Placement of the concrete shall be a continuous operation throughout the pour. The overlay shall be placed as close to its final position as possible and then mechanically consolidated and screeded to final grade. All finishing and texturing shall be according to Article 503.17.

Internal vibration shall be performed along edges, adjacent to bulkheads, and where the overlay thickness exceeds 75 mm (3 in.). Internal vibration along the longitudinal edges of a pour shall be performed with a minimum of 2 hand-held vibrators, one on each edge of the pour. Hand finishing shall be performed along the edges of the pour and shall be done from sidewalks, curbs or work bridges.

A construction dam or bulkhead shall be installed in case of a delay of 30 minutes or more in the concrete placement operation. For delays of less than 30 minutes, the end of the concrete placement shall be protected from drying with wet burlap.

Concrete placement operations shall be coordinated to limit the distance between the point of concrete placement and concrete covered with membrane curing. The distance shall not exceed 10.5 m (35 ft).

All construction joints shall be formed. When required by the Engineer the previously placed overlay shall be sawed full-depth to a straight and vertical edge before fresh concrete is placed. The Engineer will determine the extent of the removal. When longitudinal joints are not shown on the plans, the locations shall be subject to approval by the Engineer and shall not be located in the wheel paths.

The Contractor shall stencil the date of construction (month and year) and the appropriate letters MS, or MSFA when fly ash is used in the mix design, into the overlay before it takes its final set. The stencil shall be located in a conspicuous location, as determined by the Engineer, for each stage of construction. This location shall be outside of the grooving where possible and within 1 m (3 ft) of an abutment joint. The characters shall be 75 mm to 100 mm (3 to 4 in.) in height, 5 mm (1/4 in.) in depth and face the centerline of the roadway.

(3) Limitations of Operations:

- a. Weather limitations. Concrete shall not be placed unless the deck temperature is above 10°C (50°F) and the air temperature is predicted to be above 10°C (50°F) for at least 12 hours after placement. The concrete shall be maintained at a minimum of 10°C (50°F) during the curing period according to Article 1020.13. The temperature of the concrete mixture as placed shall not be less than 10°C (50°F) nor more than 32°C (90°F). If night placement is required, illumination and placement procedures will be subject to approval of the Engineer. No additional compensation will be allowed if night work is required.
- b. Other Limitations. Concrete delivery trucks shall be limited to a maximum load of 4.6 cu m (6 cu yd).

Truck mixers, concrete pumps, or other heavy equipment will not be permitted on any portion of the deck where the top reinforcing mat has been exposed. Conveyors, buggy ramps and pump piping shall be installed in a way that will not displace undercut reinforcement bars. Air compressors may be operated on the deck only if located directly over a pier and supported off undercut reinforcement bars. Compressors will not be allowed to travel over undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the deck, provided the removal does not interfere in any way with the cleaning or placement operations.

If water or contaminants from the hydro-scarification flow into the area of final cleaning or concrete placement, hydro-scarification shall be suspended until the concrete has been placed and has cured a minimum of 24 hours. No concrete shall be removed within 1.8 m (6 ft) of a newly-placed overlay until the concrete has obtained a minimum compressive strength of 20.7 MPa (3000 psi) or flexural strength of 4 MPa (600 psi).

- (4) Curing Procedure. Curing shall be as specified in Section 1020 of the Standard Specifications, except Membrane Curing Type II will be required without seasonal limitations and protective coat will not be required. Exposed reinforcing steel and construction joint areas shall be covered or shielded from the curing compound. The wetted burlap shall be placed using an additional separate work bridge as soon as the overlay has set sufficiently to prevent marring the surface during placement. The surface shall be continuously wet cured for at least 7 days.
- (5) Opening to Traffic. No traffic or construction equipment will be permitted on the overlay until after the specified cure period and the concrete has obtained a minimum compressive strength of 27.6 MPa (4000 psi) or flexural strength of 4.65 MPa (675 psi) unless permitted by the Engineer.
- (6) Overlay Testing. The Engineer reserves the right to conduct pull-off tests on the overlay to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The overlay will be tested according to the Illinois Pull-off Test (Overlay Method), and the Contractor shall provide the test equipment. Each individual test shall have a minimum strength of 1034 kPa (150 psi). Unacceptable test results will require removal and replacement of the overlay at the Contractor's expense, and the locations will be determined by the Engineer. When removing portions of an overlay, the saw cut shall be a minimum depth of 25 mm (1 in.).

If the overlay is to remain in place, all core holes due to testing shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent material.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions; or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Method of Measurement. The area of scarification on the bridge deck will be measured for payment in square meters (square yards).

The concrete overlay will be measured for payment in square meters (square yards). The additional concrete placed with the overlay required to fill all depressions up to and including 19 mm (3/4 in.) below the specified thickness will not be measured for payment. Overlay material used to fill additional partial depth patches made after scarification will be included in the measurement for DECK SLAB REPAIR (PARTIAL).

Basis of Payment. The concrete bridge deck scarification will be paid for at the contract unit price per square meter (square yard) for CONCRETE BRIDGE DECK SCARIFICATION, of the thickness specified.

Microsilica concrete overlay will be paid for at the contract unit price per square meter (square yard) for BRIDGE DECK MICROSILICA CONCRETE OVERLAY, of the thickness specified.

When the Engineer conducts pull-off tests on the overlay and they are acceptable, Contractor expenses incurred due to testing and for filling core holes will be paid according to Article 109.04. Unacceptable pull-off tests will be at the Contractor's expense.

When specified, the Contractor has the option of choosing the type of overlay. The options will be limited to those specified in the plans and will be paid for at the contract unit price per square meter (square yard) for BRIDGE DECK CONCRETE OVERLAY OPTION, of the thickness specified.

Overlay material placed off the deck in abutment backwalls, and/or other locations will not be measured for payment but will be included in the pay item involved.

Additional partial depth patches poured monolithically with the overlay will be paid for at the contract unit price bid per square meter (square yard) for DECK SLAB REPAIR (PARTIAL).

SILICONE BRIDGE JOINT SEALER

Effective: August 1, 1995

Revised: January 1, 2002

Description. This work shall consist of furnishing all labor, equipment, technical assistance and materials necessary to install the silicone joint sealer as shown on the plans and as specified herein.

When specified, a polymer concrete nosing compatible with the silicone sealant as required by the sealant manufacturer shall be installed. The minimum dimensions for a polymer concrete nosing cross section are 40 mm (1 1/2 in.) deep by 90 mm (3 1/2 in.) wide. The polymer concrete shall be furnished and installed according to the Special Provision for "Polymer Concrete".

Materials:

- (a) Silicone Joint Sealer. The silicone joint sealer shall be rapid cure, self-leveling, cold applied, two component silicone sealant. The sealant, upon curing, shall demonstrate resilience, flexibility and resistance to moisture and puncture. The sealant shall also demonstrate excellent adhesion to portland cement concrete, polymer concrete and steel over a range of temperatures from -34 to 54°C (-30 to 130°F) while maintaining a watertight seal. The sealant shall not contain any solvents or diluents that cause shrinkage or expansion during curing. Acid cure sealants are not acceptable. The date of manufacture shall be provided with each lot. Materials twelve months old or older from the date of manufacture will not be accepted. The manufacturer shall certify that the sealant meets or exceeds the following test requirements before installation begins. The Department reserves the right to test representative samples from material proposed for use.

Physical Properties:

Each component as supplied:

Specific Gravity (ASTM D1475)	1.3-1.4
Extrusion Rate (MIL-5-8802)	200 - 550 grams per minute
Flow	Self-leveling

Durometer Hardness, Shore (ASTM D 2240) "00" (0° and 25°C \pm 1°C (77 \pm 3°F.))	40-80
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Ozone and U.V. (ASTM C 793-75) Resistance	No chalking, cracking or bond loss after 5,000 hours.
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After Mixing:

Tack Free Time (ASTM C679)	60 minutes max.
Joint Cure Rate (% of total cure)	50% within 4 - 6 hours 75% within 24 hours 100% within 48 - 160 hours

Upon Complete Cure: (ASTM D-3583¹)

Joint Elongation (adhesion to concrete/steel/polymer concrete)	600% min
Joint Modulus	21-83 kPa (3-12 psi) @ 100% elongation

¹Modified; Sample cured 2 days at 25 \pm 1°C (77 \pm 2°F) 50 \pm 5% relative humidity

- (b) Backer Rod. The backer rod shall conform to ASTM D5249, Type 3.

CONSTRUCTION REQUIREMENTS

General. Technical assistance provided by the manufacturer during surface preparation and installation shall be furnished at no additional cost to the Department. The Contractor shall furnish the Engineer with the manufacturer's written product information, installation procedures, and instructional video at least two weeks prior to installation. The Contractor, the manufacturer's representative, and the Engineer shall meet to review and clarify installation procedures, and requirements prior to starting the work. A technical representative must be present for the start of surface preparations and installation for at

least one day. The Contractor shall contact the manufacturer at least two weeks prior to installation.

When placing the silicone against concrete, the concrete surface shall be dry. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of 7 additional days prior to placement of the silicone. Cold, wet, inclement weather will require an extended drying time.

(a) Surface Preparation:

- (1) Sandblasting. Both faces of the joint shall be sandblasted. A separate pass for each face for the full length of the joint and to the design depth of the center of the backer rod will be required. The nozzle shall be held at an angle of 30-90 degrees to the joint face, at a distance of 25-50 mm (1 - 2 in.).

For portland cement concrete and polymer concrete surfaces, sandblasting will be considered acceptable when both joint faces have a roughened surface with clean, exposed aggregate. The surface shall be free of foreign matter or plastic residue.

For steel surfaces, sandblasting will be considered acceptable when the steel surfaces have been cleaned to an SSPC-SP10 degree of cleanliness.

After sandblasting is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 620 kPa (90 psi). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line.

- (2) Priming. This operation will immediately follow sandblasting and cleaning and will only be permitted to proceed with the air and substrate temperatures are at least 5°C (41°F) and rising. Sandblasting, priming and sealing must be performed on the same day. The entire sandblasted surface shall be primed using a brush applied primer. The primer shall be allowed to dry a minimum of one hour or more until it is thoroughly dry, whichever is longer, before proceeding. For steel surfaces, the minimum drying time shall be extended to 90 minutes when the substrate temperature is below 15°C (60°F).

For portland cement concrete and polymer concrete, the primer shall be in according to the manufacturer's recommendations. For steel surfaces, the primer shall be a rust inhibiting primer recommended by the sealant manufacturer.

The primer shall be supplied in original containers and shall have a "use-by" date clearly marked on them. Only primer, freshly poured from the original container into clean pails will be permitted. The primer must be used immediately. All primer left in the pail after priming shall be disposed of and shall not be reused.

(b) Joint Installation:

- (1) Backer Rod Placement. The backer rod shall be installed to a uniform depth as specified on the plans and as recommended by the manufacturer. All splices in the backer rod shall be taped to prevent material loss during sealing. The backer rod shall be installed to within 3 mm (1/8 in.) tolerance prior to sealing.

- (2) Sealant Placement. The sealant shall be 13 mm (1/2 in.) thick within ± 3 mm (1/8 in.) tolerance as measured in the center of the joint at the thinnest point. The sealant thickness shall be measured during installation every ± 600 mm (± 2 ft). Adjustments to correct sealant thickness to within tolerance shall be made immediately before the sealant begins to set up. Sealant placement will only be permitted when the air and substrate temperatures are above 5°C (41°F) and 2.8°C (5°F) above the dew point. The joint must be kept clean and dry during sealing. If the joint becomes wet and/or dirty during sealing, the operation will be halted until the joint has been restored to a clean and dry state.

Sealing shall be performed using a pneumatic gun approved by the sealant manufacturer. Prior to sealing, the gun shall be inspected to insure that it is in proper working order and that it is being operated at the recommended air pressure.

The gun must demonstrate proper mixing action before sealant will be allowed into the joint. Unmixed sealant will not be permitted in the joint. All unmixed sealant found in the joint will be removed and replaced at the Contractors expense.

After the Engineer has determined that the pneumatic gun is functioning properly, the joint shall be sealed to the thickness and depth as shown on the plans. The sealant must be allowed to achieve initial set before opening the joint to traffic.

End of seal treatment at vertical faces of curbs, sidewalks or parapets shall be as recommended by the manufacturer and as shown on the plans.

Sealant placed incorrectly shall be removed and replaced by the Contractor at no additional cost to the Department.

- (3) Field Testing. A minimum of one joint per bridge per joint configuration will be tested by the Engineer by performing a Pull Test. The sealant shall be allowed to cure for a minimum of 24 hours before testing. The locations for the tests will be determined by the Engineer. The tests will be performed per the manufacture's written instructions. As part of the test, the depth and thickness of the sealant will be verified. All joint system installations failing to meet the specifications shall be removed and replaced, by the Contractor, to the satisfaction of the Engineer at no additional cost to the Department. In addition, the "Pull Test" is a destructive test, the Contractor shall repair the joint after completion of the test per the manufacturer's written instructions at no additional cost to the Department.

Method of Measurement. The installed joint sealer will be measured in meters (feet) along the centerline of the joint.

Basis of Payment. The silicone joint sealer measured as specified will be paid for at the contract unit price per meter (foot) for SILICONE JOINT SEALER, of the size specified. When a polymer concrete nosing is specified it shall not be included in this item but will be paid for according to the Special Provision for "Polymer Concrete".

BITUMINOUS CONCRETE SURFACE COURSE

Effective: April 1, 2001

For bituminous surface course mixture only, revise the 5th paragraph of Article 406.23 of the Standard Specifications to read:

"The metric tons (tons) paid for surface course mixture will be calculated using the following formula:

METRIC TONS(TONS) PAID = METRIC TONS (TONS) PAID is based on weight tickets required by the 4th paragraph of this Article but shall not exceed 103 percent of the Adjusted Plan Quantity. The Adjusted Plan Quantity is calculated as follows:

Adjusted Plan Quantity = C x quantity shown on plans or as specified by the Engineer.

Nomenclature: (Metric)

$$C = \frac{(d) \times 999.6 \times 0.025}{59.8} = (d)(0.4179)$$

d = G_{mb} = average bulk specific gravity (d) from approved mix design.
59.8 = Constant; unit weight of surface course shown on the plans, in kg/sq m/25 mm, used to estimate plan quantity.
999.6 = Constant; for conversion.
0.025 = Constant; for conversion.

Nomenclature: (English)

$$C = \frac{(d) \times 62.4 \times 0.75}{112.0}$$

d = G_{mb} = average bulk specific gravity (d) from approved mix design.
112.0 = Constant; unit weight of surface course shown on the plans, in lbs./sq.yd./in., used to estimate plan quantity.
62.4 = Constant; for conversion.
0.75 = Constant; for conversion.

If project circumstances warrant a new surface course mix design, the above formulae shall be used to calculate the METRIC TONS (TONS) PAID for tonnage placed using each respective mix design."

80050

COARSE AGGREGATE FOR BITUMINOUS COURSES (BDE)

Effective: November 1, 2000

Revised: January 1, 2001

Replace Article 1004.03(a) of the Standard Specifications with the following:

(a) Description. The coarse aggregate for bituminous courses shall be according to the following table.

Class	Mixture	Aggregates Allowed
A	Seal or Cover	Gravel Crushed Gravel Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
B		Gravel Crushed Gravel Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete
I And Superpave	A or B and IL-25.0 or IL-19.0 Binder	Crushed Gravel Crushed Stone Crushed Sandstone Crushed Slag (ACBF)
I And Superpave	C Surface	Crushed Gravel Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag except when used as leveling binder Gravel – only when used in Class I Type 3CL or Superpave IL-9.5L

I and Superpave	D Surface	<p>Crushed Gravel Crushed Stone (other than Limestone) Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag</p> <p>Limestone may be used in Mixture D if blended by volume in the following coarse aggregate percentages: Up to 25% Limestone with at least 75% Dolomite Up to 50% Limestone with at least 50% any aggregate listed for Mixture D except Dolomite Up to 75% Limestone with at least 25% Crushed Slag (ACBF) or Crushed Sandstone</p>
I and Superpave	E Surface	<p>Crushed Gravel Crushed Stone (other than Limestone and Dolomite) Crushed Sandstone</p> <p>No Limestone.</p> <p>Dolomite may be used in Mixture E if blended by volume in the following coarse aggregate percentages: Up to 75% Dolomite with at least 25% Crushed Sandstone, Crushed Slag (ACBF), or Crushed Steel Slag. When Crushed Slag (ACBF) or Crushed Steel Slag are used in the blend, the blend shall contain a minimum of 25% to a maximum of 75% of either Slag by volume. Up to 50% Dolomite with at least 50% of any aggregate listed for Mixture E.</p> <p>If required to meet design criteria, Crushed Gravel or Crushed Stone (other than Limestone or Dolomite) may be blended by volume in the following coarse aggregate percentages: Up to 75% Crushed Gravel or Crushed Stone (other than Limestone or Dolomite) with at least 25% Crushed Sandstone, Crushed Slag (ACBF), or Crushed Steel Slag. When Crushed Slag (ACBF) or Crushed Steel Slag are used in the blend, the blend shall contain a minimum of 25% to a maximum of 50% of either Slag by volume.</p>

I and Superpave	F Surface	Crushed Sandstone No Limestone. Crushed Gravel or Crushed Stone (except Limestone) may be used in Mixture F if blended by volume in the following coarse aggregate percentages: Up to 50% Crushed Gravel or Crushed Stone with at least 50% Crushed Sandstone, Crushed Slag (ACBF), or Crushed Steel Slag. When Crushed Slag (ACBF) or Crushed Steel Slag are used in the blend, the blend shall contain a minimum of 50% to a maximum of 75% of either Slag by volume
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FINE AGGREGATE FOR PORTLAND CEMENT CONCRETE AND MORTAR (BDE)

Effective: November 1, 2000

Revised: April 1, 2001

Revise Article 1003.02 to read as follows:

“1003.02 Fine aggregate for Portland Cement Concrete and Mortar. The aggregate shall meet the requirements of Article 1003.01 and the following specific requirements:

- (a) Description. The fine aggregate shall consist of washed sand, washed stone sand, or a blend of washed sand and washed stone sand approved by the Engineer. Stone sand produced through an air separation system approved by the Engineer may be used in place of washed stone sand.
- (b) Quality. The fine aggregate materials in the gradations specified for portland cement concrete shall meet Class A Quality, except that the minus 75µm (No. 200) sieve AASHTO T11 requirement in the Fine Aggregate Quality Table shall not apply to washed stone sand or any blend of washed stone sand and washed sand approved by the Engineer. The fine aggregate for masonry mortar shall meet Class A Quality or, in the case of natural sand, shall meet the deleterious quantity limits for Class A Quality.
- (c) Gradation. The washed sand for portland cement concrete shall be Gradation FA 1 or FA 2. Washed stone sand for portland cement concrete, which includes any blend with washed sand, shall be Gradation FA 1, FA 2, or FA 20. Fine aggregate for masonry mortar shall be Gradation FA 9.
- (d) Use of Fine Aggregates. The blending, alternate use, and /or substitution of fine aggregates from different sources for use in portland cement concrete will not be permitted without the approval of the Engineer. Any blending shall be by interlocked mechanical feeders at the aggregate source or concrete plant. The blending shall be uniform, and the equipment shall be approved by the Engineer.”

FLY ASH IN PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2001

Revised: April 1, 2001

Revise Article 1020.05(c) to read as follows:

(c) Fly Ash. At the Contractor's option, fly ash from approved sources may partially replace portland cement in concrete mixtures, for Class BD, PV, MS, SI, SC, and SH, except when blended cements are used. A mix design consisting of cement, fly ash, and ground granulated blast-furnace slag may be used only when specified by the Department. For Class PP concrete, fly ash may be used according to Article 1020.04.

Fly ash and all other materials proposed for portland cement concrete mix designs shall be furnished to the Engineer at least 60 days prior to the initiation of work. The Engineer may elect to waive the required mix designs if the proposed materials combination has been previously approved and has demonstrated satisfactory field performance.

If Class F fly ash is used, the amount of cement replaced shall not exceed 15 percent by mass (weight), and the replacement ratio (fly ash:cement replaced) shall be a minimum of 1.5:1.

If Class C fly ash is used, the amount of cement replaced shall not exceed 20 percent by mass (weight), at a minimum replacement ratio of 1.25:1. For Class C fly ash, the minimum replacement ratio may be reduced to 1:1, if the fly ash calcium oxide is 18% or greater, the fly ash loss on ignition is less than 2.0%, and a water-reducing or high range water-reducing admixture is used.

For Class PP concrete, the cement replacement with fly ash shall be according to Article 1020.04.

For bridge decks, parapets, pier and abutment caps, backwalls, wingwalls and upper 750 mm (2.5 ft.) of solid piers, the amount of cement replaced shall not exceed 15 percent by mass (weight) at a minimum replacement ratio of 1.5:1, regardless of the type of fly ash used.

Measurements of fly ash and cement shall be rounded up to the nearest 2.4 kg (5 lbs.).

Mix design strength requirements for fly ash compensated mixes shall be according to Article 1020.04.

Requirements for opening the pavement and/or structures to traffic and removal of falsework shall be according to Articles 701.05 and 503.05, except a minimum of 28 days from time of placement shall elapse in the absence of strength tests.

Except for Class PP concrete, fly ash shall not be used in concrete mixtures when the air temperature is below 4° C (40° F), without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to reduce the quantity of fly ash, increase the cement, or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

Fly ash with an R factor greater than 3.0 shall not be used in concrete which will be subjected to high sulfate concentrations in soil or water. High sulfate soils shall be those with concentrations of water soluble sulfate (as SO₄) greater than 0.10 percent, and high sulfate waters shall be those with sulfate concentrations (as SO₄) greater than 150 mg/L.

GRADATION FOR FINE AND COARSE AGGREGATES

Effective: April 1, 2001
Revised: January 1, 2002

Add the following note to the tables titled "Fine Aggregate Gradations" in Article 1003.01(c) of the Standard Specifications:

"6/ Any aggregate produced under the Department's current Policy Memorandum, 'Aggregate Gradation Control System (AGCS)', shall meet the gradation requirements set under the AGCS program."

Add the following note to the tables titled "Coarse Aggregate Gradations" in Article 1004.01(c) of the Standard Specifications:

"9/ Any aggregate produced under the Department's current Policy Memorandum, 'Aggregate Gradation Control System (AGCS)', shall meet the gradation requirements set under the AGCS program."

80047

PUMPING BRIDGE DECK (BDE)

Effective: August 1, 2000

If a boom-type pump is used to place Class BD concrete, one of the following shall be attached to the discharge end of the pump conduit:

1. An "S" shaped configuration of flexible or rigid conduit.
2. A "90 degree" elbow with a minimum of 10 feet (3 meters) of flexible conduit placed parallel to the deck.
3. Other similar configurations approved by the Engineer.

80023

GROUND GRANULATED BLAST-FURNACE SLAG IN PORTLAND CEMENT CONCRETE (BDE)

Effective: April 1, 1995

Revised: January 1, 2002

Add the following to Article 1020.05 of the Standard Specifications:

- "(k) Ground Granulated Blast-Furnace Slag. At the Contractor's option, GGBF slag may partially replace portland cement in concrete mixtures, for Class BD, PV, MS, SI, SC and SH, except when blended cements are used. A mix design consisting of cement, GGBF slag, and fly ash may be used only when specified by the Department. For Class PP concrete, GGBF slag may be used according to Article 1020.04.

GGBF slag and all other materials proposed for portland cement concrete mix designs shall be furnished to the Engineer at least 60 days prior to the initiation of work. The Engineer may elect to waive the required mix designs if the proposed materials combination has been previously approved and has demonstrated satisfactory field performance.

The amount of cement replaced by GGBF slag shall not exceed 25 percent by mass (weight). The replacement ratio (GGBF slag:cement replaced) shall be a minimum of 1 to 1 for Grade 100 and 120. Measurements of GGBF slag and cement shall be rounded up to the nearest 2.5 kg (5 lb).

Mix design strength requirements for GGBF slag compensated mixes shall be according to Article 1020.04.

Requirements for opening the pavement and/or structures to traffic and removal of falsework shall be according to Articles 701.05 and 503.04 respectively, except a minimum of 28 days from time of placement shall elapse in the absence of strength tests.

Except for Class PP concrete, GGBF slag shall not be used in concrete mixtures when the air temperature is below 4 °C (40 °F) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to reduce the quantity of GGBF slag, increase the cement, or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b)."

80034

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require contractors to pay subcontractors for satisfactory performance of their subcontracts within a specific number of days after receipt of each payment made to the contractor, and to require the prompt return of retainage withheld from subcontractors.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a contractor receives any payment from the Department, the contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

As partial payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the partial payment to the Contractor. Subcontractors shall be paid in full, including the return of any retainage previously withheld, within 15 calendar days after the subcontractor's work has been satisfactorily completed.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond in accordance with the Public Construction Bond Act, 30 ILCS 550.

QUALITY CONTROL/QUALITY ASSURANCE OF BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: July 1, 1996

Revised: January 1, 2002

Description. This special provision establishes and describes the quality control responsibilities of the Contractor in producing and constructing bituminous concrete mixtures and defines the quality assurance and acceptance responsibilities of the Engineer for Quality Management Projects.

The Contractor, by application for and receipt of prequalification, by submission of a bid, and if awarded the contract, by execution of the Contract containing this special provision, certifies that he/she: fully and thoroughly understands all aspects and requirements of this special provision; possesses the latest edition of and thoroughly understands all aspects and requirements of the procedures, manuals, and documents referred to and incorporated by reference in this special provision; and waives and releases any and all claims of misunderstanding or lack of knowledge of the same. Furthermore, the Contractor understands and agrees that compliance with the requirements of this special provision and of the Annual Quality Control Plan and job-specific Quality Control Addenda approved by the Engineer is an essential element of the Contract. Failure to comply with these requirements can result in one or more of the following: a major breach of this contract and default thereof, a loss of prequalification, and a suspension of the Contractor from bidding.

Bituminous concrete mixtures shall be produced and constructed according to the appropriate Section(s) of the Standard Specifications and the following.

The following is a listing of bituminous concrete quality control/quality assurance documents:

- (a) Model Annual Quality Control (QC) Plan for Hot-Mix Asphalt (HMA) Production
- (b) Model Quality Control (QC) Addenda for Hot-Mix Asphalt (HMA) Production
- (c) Bituminous Concrete QC/QA Laboratory Equipment
- (d) Illinois Modified ASTM D 2950, Standard Test Method for Determination of Density of Bituminous Concrete In-Place by Nuclear Method
- (e) Standard Test Method for Correlating Nuclear Gauge Densities with Core Densities
- (f) Bituminous Concrete QC/QA Start-Up Procedures
- (g) Bituminous Concrete QC/QA QC Personnel Responsibilities and Duties Checklist
- (h) Bituminous Concrete QC/QA Initial Daily Plant and Random Samples
- (i) Determination of Random Density Test Site Locations
- (j) Bituminous Concrete QC/QA Control Charts/Rounding Test Values
- (k) Bituminous Mixture Design Verification Procedure
- (l) Development of Gradation Bands on Incoming Aggregate at Mix Plants
- (m) Procedure for Asphalt Content of Bituminous Concrete Mixtures by the Nuclear Method (Modified AASHTO T 287-90)

Materials.

- (a) Class I Bituminous Concrete Mixtures. All aggregates shall be produced according to the Department's "Aggregate Gradation Control System". Gradations other than those specified in Sections 1003 and 1004 of the Standard Specifications produced according to the Department's "Aggregate Gradation Control System" may be used for Class I Types 1, 2, and 3 mixtures.

- (b) Non-Class I Bituminous Concrete Mixtures. Materials shall be according to the Standard Specifications for each mixture listed:

Mix Type	Article
Bituminous Aggregate Mixture	312.03
Base Course	355.02
Base Course Widening	356.02
Class B (Plant Mix)	405.02
Shoulder	482.02

If the Contractor receives approval to use a Class I mixture where not required by the contract, either Quality Control program may be used at the Contractor's option.

Equipment. The Contractor may utilize innovative equipment or techniques according to Section 1100 of the Standard Specifications.

- (a) Laboratory. The Contractor shall provide a laboratory, at the plant, approved annually by the Engineer. Any other laboratory location will require approval by the Engineer. The laboratory shall be of sufficient size and be furnished with the necessary equipment and supplies for adequately and safely performing the Contractor's quality control testing. The Contractor is referred to the Department's "Model Annual Quality Control Plan for Hot-Mix Asphalt (HMA) Production" for detailed information on the required laboratories. The required laboratory equipment for production and mix design is listed in the Department's "Bituminous Concrete QC/QA Laboratory Equipment."

The laboratory and equipment furnished by the Contractor shall be properly maintained. The Contractor shall maintain a record of calibration results at the laboratory. The Engineer may inspect measuring and testing devices at any time to confirm both calibration and condition. If the Engineer determines the equipment is not within the limits of dimensions or calibration described in the appropriate test method, the Engineer may stop production until corrective action is taken. If laboratory equipment becomes inoperable, the Contractor shall cease mix production.

- (b) Plant Requirements. The Contractor shall provide documentation that the bituminous plants have been calibrated and approved. The Engineer or his/her representative will witness the calibration. This information shall be documented on the appropriate forms and be submitted to the Engineer before any bituminous mix production begins.

Quality Control Plan and Addenda. The approved Annual QC Plan and QC Addenda shall become part of the contract between the Department and the Contractor but shall not be construed, in itself, as acceptance of any bituminous mixture produced. Failure to execute the contract according to the approved Annual QC Plan and QC Addenda will result in suspension of bituminous mix production or other appropriate actions as directed by the Engineer.

The Contractor shall submit in writing to the Engineer a proposed Annual Quality Control (QC) Plan for each bituminous concrete plant for approval before each construction season. Job-specific QC Addenda to the Annual QC Plan must be submitted in writing to the Engineer for approval before the pre-construction conference. The Annual QC Plan and the QC Addenda shall address all elements involved in the production and quality control of the bituminous mixtures incorporated in the project. The proposed QC Plan shall be the Department's "Model

Annual Quality Control Plan for Hot-Mix Asphalt (HMA) Production", and the QC Addenda shall be the Department's "Model Quality Control Addendum for Hot-Mix Asphalt (HMA) Production".

The Contractor may propose revisions to portions of the Department's Annual QC Plan and QC Addenda. Revisions require proper justification be provided to the Department by the Contractor to ensure product quality. Any revision in the Annual QC Plan or QC Addenda must be approved in writing by the Engineer.

Construction of bituminous items subject to the Contractor's quality control shall not begin without approval of the Annual QC Plan and QC Addenda by the Engineer.

The Contractor will be notified in writing upon approval of the Annual QC Plan and QC Addenda by the Engineer.

The Annual QC Plan and QC Addenda may be amended during the progress of the work, by either party, subject to mutual agreement. Revisions require proper justification be provided to the Department to ensure product quality. The Contractor will be notified in writing by the Engineer upon approval of any amendments to the Annual QC Plan and/or QC Addenda.

Mix Design Requirements. The Contractor shall provide mix designs for each type of required mixture. The mixture design shall be performed and documented according to the Department's current Bituminous Concrete Level III Technician Course manual entitled "Bituminous Mixture Design Procedure". Each specific mixture design shall be submitted to and verified by the Department as detailed in the Department's current "Bituminous Mixture Design Verification Procedure."

- (a) Class I Bituminous Concrete Mixtures. The mixture shall be designed according to the criteria stated in Article 406.13 of the Standard Specifications and the contract.
- (b) Non-Class I Bituminous Concrete Mixtures. The 50-blow Marshall mixture design criteria listed below shall apply.

Mix Type	Minimum Stability kN (lb)	Maximum Flow 0.25 mm (0.01 in.)	Air Voids %
Bituminous Aggregate Mixture	6.6 (1500)	19	3 ± 1
Base Course	6.6 (1500)	19	3 ± 1
Base Course Widening	6.6 (1500)	19	3 ± 1
Class B (Plant Mix)	6.6 (1500)	19	3 ± 1
Shoulder	6.6 (1500)	19	2 ± 1

Specific mixture designs may be assigned to more than one project or plant and may be used from one construction season to the next provided the designs are resubmitted for verification according to the Department's "Bituminous Mixture Design Verification Procedure". In no case shall aggregates from a different source be substituted in a specific mixture design without complete redesign of the mixture.

The mix design shall be developed, performed, and tested by qualified personnel in a mix design laboratory approved by the Department, using the Department's current Level III procedure. For personnel requirements, see the section in this provision entitled, "Quality Control by Contractor".

Start Of Mix Production And Job Mix Formula (JMF) Adjustments. The job mix formula (mix design) represents the aggregate grading and asphalt content that produce the desired mix criteria in the laboratory.

- (a) Class I Bituminous Concrete Mixtures. During the mixture start-up the Contractor shall follow the Department's "Bituminous Concrete QC/QA Start-Up Procedures". Article 406.15(b) of the Standard Specifications shall not apply.

At the start of mix production, QC/QA mixture start-up will be required for the following situations: at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.

Before start-up, target values shall be determined by applying gradation correction factors to the JMF when applicable. These correction factors shall be determined from previous experience. The target values, when approved by the Engineer, shall be used to control mix production. Plant settings and control charts shall be set according to target values.

In the field, slight adjustments to the JMF or minor changes in cold-feed/hot-bin blends may be necessary to obtain the desired air voids, density, uniformity, and constructibility. After any JMF adjustment, the JMF shall become the adjusted job mix formula (AJMF). Upon completion of the first acceptable test strip, the JMF shall become the AJMF regardless of whether or not the JMF has been adjusted. If an adjustment/plant change is made, the Engineer may require a new test strip to be constructed. If the bituminous mixture placed during the initial test strip is determined to be unacceptable to remain in place by the Engineer, it shall be removed and replaced.

Any adjustments outside the above limitations will require a new mix design. The limitations between the JMF and AJMF are as follows:

Parameter	Adjustment
12.5 mm (1/2 in.)	± 5.0%
4.75 mm (No. 4)	± 4.0%
2.36 mm (No. 8)	± 3.0%
600 µm (No. 30)	*
75 µm (No. 200)	*
Asphalt Content	± 0.3%

*In no case shall the target for the amount passing be greater than the JMF.

After an acceptable test strip, including required plant tests, production of mix shall be restarted the same day, and an acceptable rolling pattern shall be established in the first 180 metric tons (200 tons) of mix produced. Paving may continue for the remainder of the day. After an acceptable rolling pattern has been established, it shall not be changed unless approved by the Engineer.

If a mixture start-up is not required, an acceptable rolling pattern shall be developed during the first 275 metric tons (300 tons) of each mixture produced.

A nuclear/core correlation, if required by the Engineer, shall follow the Department's "Standard Test Method for Correlating Nuclear Gauge Densities with Core Densities" and shall be performed by the Contractor during the first production day.

Regardless which QC procedures are used during start of mix production, the next day's production shall not resume until all test results, including an acceptable nuclear/core correlation, are available and an AJMF is agreed upon by the Contractor and Engineer.

- (b) Non-Class I Bituminous Concrete Mixtures. In the field, slight adjustments to the gradation and/or asphalt content may be necessary to obtain the desired air voids, density, uniformity, and constructibility. These adjustments define the adjusted job mix formula (AJMF) and become the target values for quality control operations. Limitations between the JMF and AJMF are as follows. Any adjustments outside the limitations will require a new mix design.

Parameter	Adjustment
12.5 mm (1/2 in.)	± 6%
4.75 mm (No. 4)	± 5%
75 µm (No. 200)	± 2.5%
Asphalt Content	± 0.5%

Production is not required to stop after a growth curve has been constructed provided the test results are available to both the Contractor and Engineer before the following day's production.

During production the Contractor and Engineer shall continue to evaluate test results and mixture laydown and compaction performance. Adjustments within the above requirements may be necessary to obtain the desired mixture properties. If an adjustment/plant change is made, the Engineer may request additional growth curves and supporting plant tests.

Quality Control by Contractor. The Contractor shall perform or have performed the inspection and tests required to assure conformance to contract requirements. Control includes the recognition of obvious defects and their immediate correction. This may require increased testing, communication of test results to the plant or the job site, modification of operations, suspension of bituminous mix production, rejection of material, or other actions as appropriate.

The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported to the Engineer no later than the start of the next work day.

- (a) Personnel. The Contractor shall provide a Quality Control (QC) Manager who shall have overall responsibility and authority for quality control. This individual shall have successfully completed the Department's Bituminous Concrete Level II Technician Course, "Bituminous Concrete Proportioning and Mixture Evaluation".

In addition to the QC Manager, the Contractor shall provide sufficient personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. Mix designs shall be developed by personnel who have successfully completed the Department's Bituminous Concrete Level III Course, "Bituminous Mixture Design Procedure". All technicians who shall be performing mix design testing and plant sampling/testing shall have successfully completed the Department's Bituminous

Concrete Level I Technician Course, "Bituminous Concrete Testing". The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Bituminous Concrete Level II Technician. The Contractor shall provide a Bituminous Concrete Density Tester who has successfully completed the Department's "Bituminous Concrete Nuclear Density Testing Course" to run all required density tests on the job site.

All quality control personnel shall perform the required quality control duties. The Contractor is referred to the Department's "QC Personnel Responsibilities and Duties Checklist" for a description of personnel qualifications and duties. Testing shall be conducted to control the production of the bituminous mixture.

- (b) Plant Tests. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated:

Parameter	Frequency of Tests Class I Mixtures	Frequency of Tests Non-Class I Mixtures	Test Method
Aggregate Gradation Hot bins for batch and continuous plants. Individual cold- feeds or combined belt-feed for drier- drum plants. % passing sieves: 12.5 mm (1/2 in.), 4.75 mm (No. 4), 2.36 mm (No. 8), 600 µm (No. 30), 75 µm (No. 200)	1 dry gradation per half day of production. Every third test shall be a washed ignition oven (or extraction) test on the mix, to be plotted on the control charts for the purposes of monitoring dust control.	1 dry gradation per day of production. The first day of production requires the initial test to be washed; every eighth test thereafter shall be washed. % passing sieves: 12.5 mm (1/2 in.), 4.75 mm (No. 4) 75 µm (No. 200)	Illinois Procedure (See Manual of Test Procedures for Materials).
Asphalt Content by Nuclear Gauge (or Ignition Oven if approved by the Engineer)	1 per half day of production	1 per day	Illinois Modified AASHTO T 287 (Illinois Modified AASHTO TP308)
Air Voids Bulk Specific Gravity Maximum Specific Gravity of Mixture	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	1 per day 1 per day	Illinois Modified AASHTO T 166 Illinois Modified AASHTO T 209

Article 406.10 of the Standard Specifications shall not apply except the ratio of minus 75 µm (minus No. 200) material to asphalt content during production shall not be less than 0.6 nor more than 1.2.

Contractor testing of all plant test samples shall be complete within 3 1/2 hours of sampling.

The Contractor may apply the following for small tonnage of mixture: Combined belt/hot-bin analysis, voids, and asphalt content tests may not be required on a specific mixture if the day's production is less than 225 metric tons (250 tons) per mix. A minimum of one

set of plant tests for each mix shall be performed for each five consecutive production-day period when the accumulated tonnage produced in that period exceeds 450 metric tons (500 tons). A Bituminous Concrete Level II Technician shall oversee all quality control operations. If the required tonnage of any mixture for a single pay item is less than 225 metric tons (250 tons) in total, the Contractor shall state his/her intentions of waiving the "Required Plant Tests" in the QC Addenda. The mixture shall be produced using a mix design that has been verified as specified and validated by the Department's recent acceptable field test data. A Bituminous Concrete Level II Technician shall oversee all quality control operations for the mixture.

1L (1 qt) samples of each asphalt cement (AC) type used shall be taken by the Contractor and will be witnessed by the Engineer. The minimum sampling frequency shall be twice a month. Asphalt cement sample containers will be furnished by the Department. The Engineer will submit the properly identified AC samples to the Bureau of Materials and Physical Research for testing.

For bituminous mixture sampling the Contractor shall obtain required plant samples as directed in the Department's "Bituminous Concrete QC/QA Initial Daily Plant and Random Samples". The Contractor shall split all required samples and identify the split samples per the Engineer's instructions. These split samples shall be retained by the Contractor for assurance testing by the Engineer and be disposed of only with the permission of the Engineer. The split samples shall be stored in a dry, protected location.

The Contractor shall, when necessary, take and test additional samples (designated "check" samples) at the plant during mix production. These samples in no way replace the required plant samples described above. Check samples shall be tested only for the parameters deemed necessary by the Contractor. Check sample test results shall be noted in the Plant Diary and shall not be plotted on the control charts. The Contractor shall detail the situations in which check samples will be taken in his/her Annual QC Plan.

- (c) Required Field Tests. The Contractor shall control the compaction process by testing the mix density at random locations as determined according to the Department's current "Determination of Random Density Test Site Locations" and recording the results on forms approved by the Engineer. The Contractor shall follow the density testing procedures detailed in the Department's "Illinois Modified ASTM D 2950, Standard Test Method for Determination of Density of Bituminous Concrete In-Place by Nuclear Method".

(1) Class I Bituminous Concrete Mixtures.

The Contractor shall be responsible for establishing the correlation to convert nuclear density results to core densities according to the Department's "Standard Test Method for Correlating Nuclear Gauge Densities with Core Densities". The Engineer may require a new nuclear/core correlation if the Contractor's gauge is recalibrated during the project.

If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the Department's "Determination of Random Density Test Site Locations". Three cores shall be taken at equal distances across the test site.

These cores shall be averaged to provide a single test site result. Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure.

For Class I Types 1, 2 and 3 mixtures, quality control density tests shall be performed at randomly selected locations within 800 m (1/2 mile) intervals and for each lift of 75 mm (3 in.) or less in thickness. For lifts in excess of 75 mm (3 in.) in thickness, a test shall be performed within 400 m (1/4 mile) intervals. Testing of lifts equal to or greater than 150 mm (6 in.) compacted thickness shall be performed in the direct transmission mode according to the Department's "Illinois Modified ASTM D 2950, Standard Test Method for Determination of Density of Bituminous Concrete In-Place by Nuclear Method". Density testing shall be accomplished intermittently throughout the day. In no case shall more than one half day's production be completed without performing density testing.

Density tests shall be performed each day on patches located nearest the randomly selected location. The daily testing frequency shall be a minimum of two density tests per mix. Density testing shall be accomplished intermittently throughout the day. In no case shall more than one half day's production be completed without performing density testing.

(2) Non-Class I Bituminous Concrete Mixtures.

The Contractor shall perform a growth curve at the beginning of placement of each type of mix and each lift. The growth curve shall be constructed and evaluated according to the following procedure:

The growth curve for each type of mix and each lift shall be performed within the first 180 metric tons (200 tons). If an adjustment is made to the specific mix design, the Engineer reserves the right to request an additional growth curve and supporting tests at the Contractor's expense.

Compaction of the growth curve shall commence immediately after the course is placed and at a temperature of not less than 140 °C (280 °F). The growth curve, consisting of a plot of kg/cu m (lb/cu ft) vs. number of passes with the project breakdown roller, shall be developed. This curve shall be established by use of a nuclear gauge. Tests shall be taken after each pass until the highest kg/cu m (lb/cu ft) is obtained. This value shall be the target density provided the Marshall air voids are within acceptable limits. If Marshall air voids are not within the specified limits, corrective action shall be taken, and a new target density shall be established.

A new growth curve is required if the breakdown roller used on the growth curve is replaced with a new roller during production.

The target density shall apply only to the specific gauge used. If additional gauges are to be used to determine density specification compliance, the Contractor shall establish a unique minimum allowable target density from the growth curve location for each gauge. The Department will establish a target density for its Quality Assurance nuclear gauge from the growth curve location.

All lifts shall be compacted to an average density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve. The average density shall be based on tests representing one day's production.

Quality Control density tests shall be performed at randomly selected locations within 800 m (1/2 mile) intervals per lift per lane. In no case shall more than one half day's production be completed without density testing being performed.

If the Contractor is not controlling the compaction process and is making no effort to take corrective action, the operation shall stop as directed by the Engineer.

- (d) Control Limits. Target values shall be determined by applying adjustment factors to the AJMF where applicable. The target values shall be plotted on the control charts within the following control limits:

Control Limits			
Parameter	Class I Individual Test	Class I Moving Average of 4	Non-Class I Individual Test
% Passing:			
12.5 mm (1/2 in.)	± 6%	± 4%	± 15%
4.75 mm (No. 4)	± 5%	± 4%	± 10%
2.36 mm (No. 8)	± 5%	± 3%	
600 µm (No. 30)	± 4%	± 2.5%	
75 µm (No. 200)	± 1.5%	± 1.0%	± 2.5%
Total Dust Content 75 µm(No. 200) ¹	± 1.5%	± 1.0%	± 2.5%
Asphalt Content	± 0.3%	± 0.2%	± 0.5
Voids:			
Class I Type 1	± 1.2%	± 1.0%	
Class I Type 2	± 1.2%	± 1.0%	
Class I Type 3	± 1.2%	± 1.0%	
Non-Class I - Shoulders			2% ± 1%
Non-Class I - Others			3% ± 1%
Density:			
Class I Type 1	92.0 - 96.0%		
Class I Type 2	93 - 97%		
Class I Type 3	93 - 97%		
Non-Class I			Average 95-102% Target

Note 1. Based on washed ignition oven

- (e) Control Charts. Standardized control charts shall be maintained by the Contractor at the field laboratory. The control charts shall be displayed and be accessible at the field laboratory at all times for review by the Engineer.

Individual required test results obtained by the Contractor shall be recorded on the control chart immediately upon completion of a test, but no later than 24 hours after

sampling. Only the required plant tests and resamples shall be recorded on the control chart. Any additional testing of check samples may be used for controlling the Contractor's processes, but shall be documented in the plant diary.

The results of assurance tests performed by the Engineer will be posted as soon as available.

The following parameters shall be recorded on standardized control charts as described in the Department's "Bituminous Concrete QC/QA Control Charts/Rounding Test Values".

Control limits for each required parameter, both individual tests and the average of four tests, shall be exhibited on control charts. Test results shall be posted within the time limits previously outlined.

CONTROL CHART REQUIREMENTS	CLASS I MIXES	NON-CLASS I MIXES
Combined Gradation of Hot-Bin or Belt Aggregate Samples	% Passing Sieves: 12.5 mm (1/2 in.) 4.75 mm (No. 4) 2.36 mm (No. 8) 600 μ m (No. 30) 75 μ m (No. 200)	% Passing Sieves: 12.5 mm (1/2 in.) 4.75 mm (No. 4) 75 μ m (No. 200)
Total Dust Content of Washed Ignition Oven or Extraction ¹	75 μ m (No. 200)	75 μ m (No. 200)
	Asphalt Content	Asphalt Content
	Bulk Specific Gravity	Bulk Specific Gravity
	Maximum Specific Gravity of Mixture	Maximum Specific Gravity of Mixture
	Voids	Voids
	Density	Density

Note 1. Based on washed ignition oven

(f) Corrective Action for Required Plant Tests

(1) Individual Test Results. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.

a. Voids and Asphalt Content.

1. Class I Bituminous Concrete Mixtures. If the retest for voids or asphalt content exceeds control limits, mix production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, mix production shall be restarted, the mix production shall be stabilized, and

the Contractor shall immediately resample and retest. Mix production may continue when approved by the Engineer. The corrective action shall be documented.

Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes an investigation identifying the problems causing failing test results.

2. Non-Class I Bituminous Concrete Mixtures. If the retest for voids or asphalt content exceeds control limits, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.

If corrective action has been initiated and the second resample fails, the Contractor shall cease operations. Failure to cease production shall subject all subsequently produced materials to be considered unacceptable.

Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes an investigation identifying the problems causing failing test results.

- b. Combined Aggregate/Hot-Bin. For combined aggregate/hot-bin retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.
- (2) Moving Average. When the moving average values trend toward the moving average control limits, the Contractor shall take corrective action and increase the sampling and testing frequency. The corrective action shall be documented.

The Contractor shall notify the Engineer whenever the moving average values exceed the moving average control limits. If two consecutive moving average values fall outside the moving average control limits, the Contractor shall cease operations. Corrective action shall be immediately instituted by the Contractor. Operations shall not be reinstated without the approval of the Engineer. Failure to cease operations shall subject all subsequently produced material to be considered unacceptable.
 - (3) Dust Control. If the washed ignition oven (for extraction) test results indicate a problem with controlling dust, corrective action to control the dust shall be taken and approved by the Engineer. If the Engineer determines that Positive Dust Control Equipment is necessary, as outlined in the Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot Mix Bituminous Plants and Equipment", the equipment shall be installed prior to the next construction season.
 - (4) Mix Production Control. If the Contractor is not controlling the production process and is making no effort to take corrective action, the operation shall stop.
- (g) Corrective Action for Required Field Tests (Density). When an individual density test exceeds the control limits, the Contractor shall immediately retest in a location that is halfway between the failed test site and the finish roller. If the retest passes, the Contractor shall continue the normal density test frequency. An additional density check test should be performed to verify the mix compaction.

If the retest fails, the Contractor shall immediately conduct one of the following procedures:

- (1) Low Density. If the failing density retest indicates low densities, the Contractor shall immediately increase the compaction effort, review all mixture test results representing the mix being produced, and make corrective action as needed. The Contractor shall immediately perform a second density retest within the area representing the increased compaction effort and mixture adjustments.
- (2) High Density. If the failing density retest indicates high densities, the Contractor shall cease production and placement until all mixture test results are reviewed and corrective action is taken. If the high density failure is a result of a change in the mixture, any existing material in the surge bin may be subject to rejection by the Engineer. After restart of mix production, a second density retest shall then be performed in the area representing the mixture adjustments.

If the second retest from either procedure passes, production and placement of the mix may continue. The increased compaction effort for low density failures shall not be reduced to that originally being used unless it is determined by investigation that the cause of the low density was unrelated to compaction effort, the cause was corrected, and tests show the corrective action has increased the density within the required limits.

If the second retest fails, production and placement of the mix shall cease until the Contractor has completed an investigation and the problem(s) causing the failing densities has/have been determined. If the Contractor's corrective action is approved by the Engineer, production and placement of the mix may then be resumed. The Contractor shall increase the frequency of density testing to show, to the satisfaction of the Engineer, that the corrective action taken has corrected the density problem.

If the Contractor is not controlling the compaction process and is making no effort to take corrective action, the operation, as directed by the Engineer, shall stop.

Quality Assurance By The Engineer. The Engineer will conduct independent assurance tests on split samples taken by the Contractor for quality control testing. In addition, the Engineer will witness the sampling and splitting of these samples a minimum of twice a month and will immediately retain the samples for quality assurance testing.

The overall testing frequency will be performed over the entire range of Contractor samples and will be equal to or greater than 10 percent for gradations and equal to or greater than 20 percent for asphalt content, bulk specific gravity, maximum specific gravity and field density. The Engineer may select any or all split samples for assurance testing. The Engineer will initiate independent assurance testing during mixture field verification. These tests may be performed immediately or anytime up to ten working days after sampling. The test results will be made available to the Contractor as soon as they become available.

The Contractor's nuclear/core correlation will be verified utilizing Department nuclear gauges.

The Engineer may witness the sampling and testing being performed by the Contractor. The Engineer will document all witnessed samples and tests.

The Engineer will promptly notify the Contractor, both verbally and in writing, of observed deficiencies. If the Engineer observes that the sampling and quality control tests are not being performed according to the applicable test procedures, the Engineer may stop production until corrective action is taken.

The Engineer may elect to obtain samples for testing, separate from the Contractor's quality control process, to verify specification compliance.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits:

Test Parameter	Acceptable Limits of Precision	
	Class I	Non-Class I
% Passing:		
12.5 mm (1/2 in.)	5.0%	5.0%
4.75 mm (No. 4)	5.0%	5.0%
2.36 mm (No. 8)	3.0%	
600 μ m (No. 30)	2.0%	
75 μ m (No. 200)	2.2%	2.2%
Total Dust Content 75 μ m (No. 200) ¹	2.2%	2.2%
Asphalt Content	0.3%	0.3%
Maximum Specific Gravity of Mixture	0.026	0.026
Bulk Specific Gravity	0.045	0.045
Density (Percent Compaction)	1.0% (Correlated)	1.5%*

Note 1. Based on washed ignition oven

*Applies to the final percentage difference between the gauges when compared against the individual target density of each gauge.

The Department may run extractions for assurance, when deemed necessary by the Engineer.

In the event comparison of the required plant test results is outside the above acceptable limits of precision, Department split or independent samples fail the control limits, a Department extraction indicates non-specification mix, or a continual trend of difference between Contractor and Department test results is identified, the Engineer will immediately investigate. The Engineer may suspend production as stated in Article 108.07 of the Standard Specifications, while the investigation is in progress. The investigation may include testing by the Engineer of any remaining split samples or a comparison of split sample test results on the mix currently being produced. The investigation may also include review and observation of the Contractor's technician performance, testing procedure, and equipment.

If a problem is identified with the mix, the Contractor shall take immediate corrective action. After corrective action, both the Contractor and the Engineer shall immediately resample and retest following the procedures in Subsection "Corrective Action for Required Plant Tests", of the section in this provision entitled "Quality Control by Contractor".

In the event comparison of the required field test results (densities) are outside the above acceptable limits of precision, Department split or independent samples fail the density limits, or a continual trend of difference between Contractor and Department test results is identified, the Engineer will immediately investigate. The investigation will include testing by the Engineer of any remaining random density locations. The Engineer may establish additional locations for testing by both the Contractor and the Department to provide further comparison results. The investigation shall also include review and observation of the Density Tester performance, testing procedure, and equipment. The original correlation and/or comparison data, for both gauges, shall be reviewed as part of the investigation process. If the problem continues, the Engineer may require a new correlation be performed.

Acceptance By The Engineer. Final acceptance will be based on the following:

- (a) Validation of the Contractor's quality control by the assurance process.
- (b) The Contractor's process control charts and actions.
- (c) Department assurance tests for voids and density.

If any of the above are not met, the work will be considered in non-conformance with the contract.

Documentation. The Contractor shall be responsible for documenting all observations, records of inspection, adjustments to the mixture, test results, retest results, and corrective actions in a bound hardback field book or bound hardback diary which will become the property of the Department.

The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the Contractor's consultants, or the producer of bituminous mix material.

The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

Adjustments to mixture production and test results shall be recorded in duplicate and sent to the Engineer on forms approved by the Engineer.

Basis of Payment. Quality Control/Quality Assurance of bituminous concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various bituminous contract items.

Test Strips will be paid according to the following:

- (a) If the bituminous mixture placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within the tolerances of the JMF, the initial mixture and test strip will not be paid for and shall be removed at the contractor's expense. An additional test strip will be paid for in full, if produced within the JMF tolerances.

- (b) If the bituminous mixture placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within the tolerances of the JMF, the mixture shall be removed. Removal will be paid for according to Article 109.04 of the Standard Specifications. This initial mixture and test strip will be paid for at the contract unit prices. The additional mixture shall be replaced at the contract unit price, and any additional test strips will be paid for at one half the unit price of each test strip.
- (c) If the bituminous mixture placed during a test strip is determined to be acceptable to remain in place by the Engineer and the Engineer deems a new start-up is required for any reason, the initial mixture and test strip will be paid for at the contract unit prices. The additional mixture will be paid for at the contract unit price and any additional test strips will be paid for at one half the contract unit price of each test strip.

21984

RAP FOR USE IN BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: April 1, 2002

Revise Article 1004.07 to read:

“1004.07 RAP Materials. RAP is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt pavement. RAP must originate from routes or airfields under federal, state or local agency jurisdiction. The Contractor shall supply documentation that the RAP meets these requirements.

(a) Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP will be allowed on top of the pile after the pile has been sealed.

(1) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only and represent the same aggregate quality, but shall be at least C quality or better, the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag), similar gradation and similar AC content. If approved by the Engineer, combined single pass surface/binder millings may be considered “homogenous”, with a quality rating dictated by the lowest coarse aggregate quality present in the mixture. Homogenous stockpiles shall meet the requirements of Article 1004.07(d). Homogeneous RAP stockpiles not meeting these requirements may be processed (crushing and screening) and retested.

(2) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only. The coarse aggregate in this RAP shall be crushed aggregate only and may represent more than one aggregate type and/or quality but shall be at least C quality or better. This RAP may have an inconsistent gradation and/or asphalt cement content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 16 mm (5/8 in.) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate RAP stockpiles shall meet the requirements of Article 1004.07(d).

(3) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP containing coarse aggregate (crushed or round) that is at least D quality or better. This RAP may have an inconsistent gradation and/or asphalt content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate DQ RAP shall meet the requirements of Article 1004.07(d).

Reclaimed Superpave Low ESAL IL-9.5L surface mixtures shall only be placed in conglomerate DQ RAP stockpiles due to the potential for rounded aggregate.

(4) Other. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Other”. “Other” RAP stockpiles shall not be used in any of the Department’s bituminous mixtures.

- (b) Use. The allowable use of a RAP stockpile shall be set by the lowest quality of coarse aggregate in the RAP stockpile. Class I/Superpave surface mixtures are designated as containing Class B quality coarse aggregate only. Superpave Low ESAL IL-19.0L binder and IL-9.5L surface mixtures are designated as Class C quality coarse aggregate only. Class I/Superpave binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate only. Bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate only. Any mixture not listed above shall have the designated quality determined by the Department.

RAP containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in Class I/Superpave (including Low ESAL) surface mixtures only. RAP stockpiles for use in Class I/Superpave mixtures (including Low ESAL), base course, base course widening and Class B mixtures shall be either homogeneous or conglomerate RAP stockpiles except conglomerate RAP stockpiles shall not be used in Superpave surface mixture Ndesign 50 or greater. RAP for use in bituminous aggregate mixtures (BAM) shoulders and BAM stabilized subbase shall be from homogeneous, conglomerate, or conglomerate DQ stockpiles.

Additionally, RAP used in Class I/Superpave surface mixtures shall originate from milled or crushed mixtures only, in which the coarse aggregate is of Class B quality or better. RAP stockpiles for use in Class I/Superpave (including Low ESAL) binder mixes as well as base course, base course widening and Class B mixtures shall originate from milled or processed surface mixture, binder mixture, or a combination of both mixtures uniformly blended to the satisfaction of the Engineer, in which the coarse aggregate is of Class C quality or better.

- (c) Contaminants. RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.
- (d) Testing. All RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 450 metric tons (500 tons) for the first 1800 metric tons (2,000 tons) and one sample per 1800 metric tons (2,000 tons) thereafter. A minimum of five tests shall be required for stockpiles less than 3600 metric tons (4,000 tons).

For testing existing stockpiles, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to extract representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

All of the extraction results shall be compiled and averaged for asphalt content and gradation. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous / Conglomerate	Conglomerate "D" Quality
25 mm (1 in.)		± 5%
12.5 mm (1/2 in.)	± 8%	± 15%
4.75 mm (No. 4)	± 6%	± 13%
2.36 mm (No. 8)	± 5%	
1.18 mm (No. 16)		± 15%
600 µm (No. 30)	± 5%	
75 µm (No. 200)	± 2.0%	± 4.0%
AC	± 0.4%	± 0.5%

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt content test results fall outside the appropriate tolerances, the RAP will not be allowed to be used in the Department's bituminous concrete mixtures unless the RAP representing the failing tests is removed from the stockpile to the satisfaction of the Engineer. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (e) Designs. At the Contractor's option, bituminous concrete mixtures may be constructed utilizing RAP material meeting the above detailed requirements. The amount of RAP included in the mixture shall not exceed the percentages specified in the plans.

RAP designs shall be submitted for volumetric verification. If additional RAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP stockpile and design, and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

- (f) Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the bituminous mixture being produced.

To remove or reduce agglomerated material, a scalping screen, crushing unit or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design.

SAND MODULE IMPACT ATTENUATORS (BDE)

Effective: October 15, 1976

Revised: April 1, 2002

Description. This work shall consist of furnishing, erecting, and/or relocating sand module impact attenuators and the construction of attenuator bases when specified.

Impact Attenuators. Impact attenuators shall be the self purging sand module type. The modules shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 and shall be approved by the Department. The modules shall be preassembled to the greatest extent practicable so as to reduce to a minimum the on-site installation time. The attenuator installation shall be located, oriented, and the modules assembled and filled to the nominal weights as shown on the plans. Sand for filling the modules shall conform to the requirements of Article 1003.01 of the Standard Specifications for FA-1 or FA-2 Class A quality. Unbagged sand containing not more than 5 percent moisture shall be used for filling modules.

Attenuator Bases. Prior to constructing attenuator bases, the subgrade shall be prepared to the satisfaction of the Engineer.

Attenuator bases may be constructed of either portland cement concrete or bituminous at the option of the Contractor. Portland cement concrete bases shall be 150 mm (6 in.) thick and conform to the applicable requirements of Section 424 of the Standard Specifications. Bituminous bases shall be 200 mm (8 in.) thick and conform to the applicable requirements of Section 408 of the Standard Specifications.

The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified mass (weight) of sand in each module shall be painted on the surface of the base.

Temporary. When specified as temporary, the impact attenuator shall be striped according to Standard 702001 for drums. All maintenance of the temporary impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer. When the Engineer determines the sand module impact attenuators are no longer required, the installation shall be dismantled with all sand modules and related hardware becoming the property of the Contractor.

Relocate. When the work specifies relocating the sand module impact attenuators as shown on the plans, each module shall be kept in proper orientation and position. The sand modules shall be refilled with sand when necessary.

Replacement. When the work specifies replacement of one or more individual sand module impact attenuators damaged by traffic, other than construction traffic, the following will apply. When damage to initial installation occurs, the damaged modules and the contents shall be removed completely and replaced with the required number of modules necessary to restore the installation to its original condition. The Contractor shall dispose of all damaged materials according to Article 202.03 of the Standard Specifications, and furnish and install new sand modules as directed by the Engineer. Sand modules that are not damaged, but have been laterally shifted from their original position shall be realigned and relocated to their original locations, as directed by the Engineer. Any modules damaged by the Contractor's forces shall be replaced or relocated at his/her expense.

The Contractor shall respond within 12 hours to any call from the Engineer concerning replacement of the sand module impact attenuators. If the Contractor does not respond and does not complete his/her work within 36 hours after initial call from the Engineer, then the Contractor shall be liable to the Department from the time of the initial call, in the amount of \$200/calendar day, per sand module, not as a penalty but as liquidated damages, until replacement occurs.

Method of Measurement. Contract quantities for attenuator bases may be accepted according to Article 202.07(a) of the Standard Specifications. When measured, attenuator bases will be measured in place and the dimensions used to calculate square meters (square yards) will not exceed those as shown on the plans.

Sand module impact attenuators will be measured as each for each individual module.

Basis of Payment. Attenuator bases will be paid for at the contract unit price per square meter (square yard) for ATTENUATOR BASE.

Impact attenuators will be paid for at the contract unit price each for SAND MODULE IMPACT ATTENUATOR, SAND MODULE IMPACT ATTENUATOR (TEMPORARY), SAND MODULE IMPACT ATTENUATOR (RELOCATE), or SAND MODULE IMPACT ATTENUATOR (REPLACEMENT).

80038

SEGREGATION CONTROL OF BITUMINOUS CONCRETE (BDE)

Effective: July 15, 1997

Description. This work shall consist of the visual identification and corrective action of segregated bituminous concrete in conjunction with QC/QA of Bituminous Concrete Mixtures.

Definitions.

- (a) Segregation. Areas of non-uniform distribution of coarse and fine aggregate particles in a bituminous pavement.
- (b) End-of-Load Segregation. A systematic form of segregation typically identified by chevron-shaped segregated areas at either side of a lane corresponding with the beginning and end of truck loads.
- (c) Longitudinal Segregation. A linear pattern of segregation that usually corresponds to a specific area of the paver.
- (d) Severity of Segregation.
 - 1. Low. A pattern of segregation where the mastic is in place between the aggregate particles; however, there is slightly more coarse aggregate in comparison with the surrounding acceptable mat.
 - 2. Medium. A pattern of segregation that has significantly more coarse aggregate in comparison with the surrounding acceptable mat and which exhibits some lack of mastic.
 - 3. High. A pattern of segregation that has significantly more coarse aggregate in comparison with the surrounding acceptable mat and which contains little mastic.

Quality Control by the Contractor. The Contractor and the Engineer will evaluate the in place mat daily for segregation. In the Annual Quality Control Plan or Addendum, the Contractor shall identify the individual(s) responsible for implementing this Special Provision and documenting the daily evaluations and conclusions.

The Contractor shall conduct the paving operation in a manner to prevent medium or high segregation.

The Contractor shall continually monitor the plant operations, hauling or the mix, paver operations, and the compacted mat for segregation.

If medium or high segregation has been previously identified on projects with similar paving operations and mix designs, the Contractor shall include the corrective actions specified below in the Quality Control Plans or the Quality Control Addendum.

Corrective Action by the Contractor. When medium or high segregation of the mixture is identified by the Contractor, the Engineer, or the daily evaluation, the following specific actions shall be taken:

(a) End of Load Segregation. If medium or high end-of-load segregation is identified, the following actions, as a minimum, shall be taken:

1. Trucks transporting the mixture shall be loaded in multiple dumps: The first against the front wall of the truck bed and then one against the tailgate in a manner which prevents the coarse aggregate from migrating to those locations.
2. The paver shall be operated so the hopper is never below 30 percent capacity between truck exchanges.
3. The "Head of Material" in the auger area shall be controlled to keep a constant level, ± 25 mm (1 inch) tolerance.

(b) Longitudinal Segregation. If medium or high longitudinal segregation is identified, the Contractor shall make the necessary adjustment to the slats, augers, or screeds to eliminate the segregation.

The Contractor shall implement the corrective actions as soon as possible and report them to the Engineer before the next day's paving proceeds.

Quality Control Plans and addendums for subsequent projects shall reflect the corrective actions taken under the Contract, whether the corrective action was initiated by the Contractor or the Engineer.

Investigations. If the corrective actions initiated by the Contractor are insufficient in controlling medium or high segregation, the Contractor and Engineer will investigate to determine the cause of segregation.

When an investigation indicates additional corrective action is warranted, the Contractor shall implement operational changes necessary to correct the segregation problems.

Any verification testing necessary for the investigation will be performed by the Department according to the applicable project test procedures and specification limits.

Dispute Resolution. The Engineer will represent the Department in the administration of this special provision.

In cases of disputes, the District Construction Engineer will represent the Department in any disagreement regarding the application of this specification on any Contract.

Basis of Payment. This work will not be paid for separately but will be considered as included in the cost of the various items of bituminous concrete, and no additional compensation will be allowed.

42795

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective April 1, 1992

To ensure a prompt response to incidents involving the integrity of the work zone traffic control devices, the Contractor shall provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis. When the Engineer is notified or determines a deficiency exists, (s)he shall be the sole judges to whether the deficiency is an immediate safety hazard. The Contractor shall dispatch sufficient resources within 2 hours of notification to make needed corrections of deficiencies that constitute an immediate safety hazard. Other deficiencies shall be corrected within 12 hours. If the Contractor fails to restore the required traffic control and protection within the time limits specified above, the Engineer will impose a daily monetary deduction for each 24-hour period (or portion thereof) the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Resident Engineer's acceptance of the corrections. For this project, the daily deduction will be ____* per day. In addition, if the Contractor fails to respond, the Engineer may correct the deficiencies and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

*The cost of the daily deduction will be calculated by dividing three percent of the awarded contract price by the number of calendar days anticipated for this project. The number of days anticipated for this project is 110. This procedure is to be followed regardless of whether the contract is based upon working days, contains a completion date, or has an incentive/disincentive clause.

5729I

SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: April 1, 2002

Description. This special provision establishes and describes the responsibilities of the Contractor in designing, producing, and constructing Superpave bituminous concrete mixtures using Illinois Modified Strategic Highway Research Program (SHRP) Superpave criteria. This work shall be according to Section 406 of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures", except as follows.

Materials.

- (a) Fine Aggregate Blend Requirement. The Contractor may be required to provide FA 20 manufactured sand to meet the design requirements. For mixtures with $N_{design} \geq 90$, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation.
- (b) Reclaimed Asphalt Pavement (RAP). If the Contractor is allowed to use more than 15 percent RAP, as specified in the plans, a softer PG binder may be required, as determined by the Engineer.

RAP shall meet the requirements of the special provision, "RAP for Use in Bituminous Concrete Mixtures".

RAP will not be permitted in mixtures containing polymer modifiers.

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

- (c) Bituminous Material. The asphalt cement shall be performance-graded (PG) or modified performance-graded meeting the requirements of Article 1009.05 of the Standard Specifications for the grade specified on the plans.

The following additional guidelines shall be used if a polymer modified asphalt is specified:

- (1) The polymer modified asphalt cement shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. Polymer modified asphalt cement shall be placed in an empty tank and shall not be blended with other asphalt cements.

- (2) The mixture shall be designed using a mixing temperature of $163 \pm 3^{\circ}\text{C}$ ($325 \pm 5^{\circ}\text{F}$) and a gyratory compaction temperature of $152 \pm 3^{\circ}\text{C}$ ($305 \pm 5^{\circ}\text{F}$).
- (3) Pneumatic-tired rollers will not be allowed unless otherwise specified by the Engineer. A vibratory roller meeting the requirements of Article 406.16 of the Standard Specifications shall be required in the absence of the pneumatic-tired roller.
- (4) A manufacturer's representative from the polymer asphalt cement producer shall be present during each polymer mixture start-up and shall be available at all times during production and lay-down of the mix.

Laboratory Equipment.

- (a) Superpave Gyratory Compactor. The superpave gyratory compactor (SGC) shall be used for all QC/QA testing.
- (b) Ignition Oven. The ignition oven shall be used to determine the AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations.

The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

Mixture Design. The Contractor shall submit mix designs, for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have successfully completed the course, "Superpave Mix Design Upgrade". Articles 406.10 and 406.13 of the Standard Specifications shall not apply. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below.

AASHTO MP 2	Standard Specification for Superpave Volumetric Mix Design
AASHTO PP 2	Standard Practice for Short and Long Term Aging of Hot Mix Asphalt (HMA)
AASHTO PP 19	Standard Practice for Volumetric Analysis of Compacted Hot Mix Asphalt (HMA)
AASHTO PP 28	Standard Practice for Designing Superpave HMA
AASHTO TP 4	Method for Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the SHRP Gyratory Compactor
AASHTO TP 308	Method for Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

- (a) Mixture Composition. The ingredients of the bituminous mixture shall be combined in such proportions as to produce a mixture conforming to the composition limits by weight. The gradation mixture specified on the plans shall produce a mixture falling within the limits specified in Table 1.

TABLE 1. MIXTURE COMPOSITION (% PASSING)^{1/}								
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm^{4/}		IL-9.5 mm^{4/}	
	min	max	min	max	min	max	min	max
37.5 mm (1 1/2 in.)		100						
25 mm (1 in.)	90	100		100				
19 mm (3/4 in.)		90	82	100		100		
12.5 mm (1/2 in.)	45	75	50	85	90	100		100
9.5 mm (3/8 in.)						90	90	100
4.75 mm (#4)	24	42 ^{2/}	24	50 ^{2/}	24	65	24	65
2.36 mm (#8)	16	31	16	36	16	48 ^{3/}	16	48 ^{3/}
1.18 mm (#16)	10	22	10	25	10	32	10	32
600 mm (#30)								
300 mm (#50)	4	12	4	12	4	15	4	15
150 mm (#100)	3	9	3	9	3	10	3	10
75 mm (#200)	3	6	3	6	4	6	4	6

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the 4.75 mm (#4) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 40 percent passing the 2.36 mm (#8) sieve for surface courses with Ndesign ≥ 90.

- 4/ The mixture composition for surface courses shall be according to IL-12.5 mm or IL-9.5 mm, unless otherwise specified by the Engineer.

One of the above gradations shall be used for leveling binder as specified in the plans and according to Article 406.04 of the Standard Specifications.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2

- (b) Dust/AC Ratio for Superpave. The ratio of material passing the 75 μ m (#200) sieve to total asphalt cement shall not exceed 1.0 for mixture design (based on total weight of mixture).
- (c) Volumetric Requirements. The target value for the air voids of the hot mix asphalt (HMA) shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the requirements listed in Table 2.

TABLE 2. VOLUMETRIC REQUIREMENTS					
	Voids in the Mineral Aggregate (VMA), % minimum				Voids Filled with Asphalt (VFA), %
Ndesign	IL-25.0	IL-19.0	IL-12.5	IL-9.5	
50	12.0	13.0	14.0	15	65 - 78
70					65 - 75
90					
105					

- (d) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified T 283 using 4 in. Marshall bricks. To be considered acceptable by the Department as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSRs) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSRs less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Department. The method of application shall be according to Article 406.12 of the Standard Specifications.

Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

Required Plant Tests. Testing shall be conducted to control the production of the bituminous mixture. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated in Table 3.

TABLE 3. REQUIRED PLANT TESTS for SUPERPAVE			
Parameter		Frequency of Tests	Test Method
Asphalt Content by Ignition Oven		1 per half day of production	Illinois Modified AASHTO T 308
Air Voids	Bulk Specific Gravity of Gyratory Sample	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	Illinois Modified AASHTO TP 4
	Maximum Specific Gravity of Mixture		Illinois Modified AASHTO T 209

During production, the ratio of minus 75 μ m (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.2 and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 μ m (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resuming production.

During production, mixtures containing an anti-stripping additive will be tested by the Department for stripping according to Illinois Modified T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

Control Charts/Limits. Control charts/limits shall be according to QC/QA Class I requirements, except density shall be plotted on the control charts within the following control limits:

TABLE 4. DENSITY CONTROL LIMITS	
Parameter	Individual Test
Ndesign \geq 90	92.0 - 96.0%
Ndesign < 90	93 - 97%

Method of Measurement. On full-depth pavement projects, this work will be measured in place, and the quantity for payment will be computed in square meters (square yards) of the thickness specified. The width of measurement shall be the top width of the bituminous concrete course as shown on the plans.

On resurfacing projects, this work will be measured for payment in metric tons (tons) according to 406.23 of the Standard Specifications.

Basis of Payment. On full-depth pavement projects, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, as specified in the plans.

On resurfacing projects in which polymer modifiers are not required, this work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On resurfacing projects in which polymer modifiers are required, this work will be paid for at the contract unit price per metric ton (ton) for POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, POLYMERIZED LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and POLYMERIZED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

80010

WEIGHT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 2001

Revised: April 10, 2001

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.5% (0.7% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.5% (0.7% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B} \right); \text{ Where } A \leq 1.0 ; \left(\frac{B - C}{B} \right) > 0.5\% \text{ (0.7\% for aggregates)}$$

Where A = Adjustment factor

B = Net weight shown on delivery ticket

C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

$$\text{Adjusted Net Weight} = A \times \text{Delivery Ticket Net Weight}$$

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

80048

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 60 working days.

80071

ERRATA FOR THE 2002 STANDARD SPECIFICATIONS (BDE)

Effective: January 1, 2002

Revised:..April 1, 2002

- Page vi Change "SECTION 501. BITUMINOUS TREATED EARTH SURFACE..." to "SECTION 501. REMOVAL OF EXISTING STRUCTURES...".
- Page x Add the heading "**LIGHTING**" prior to the heading "**WIRE AND CABLE**".
- Page xi Change "SECTION 830. METAL POLES..." to "SECTION 830. LIGHT POLES...".
- Page xi Add the heading "**TRAFFIC SIGNALS**" prior to the heading "**SIGNAL MAINTENANCE**".
- Page 12 Article 104.07(d). In the third line of the sixth paragraph change "(B-AC)" to "(B-A-C)".
- Page 13 Article 104.07(d). In the third line of the ninth paragraph change "(B-AC)" to "(B-A-C)".
- Page 34 Article 107.22(b). In the fifth line of the first paragraph change "Illinois Department of Conservation" to "Illinois Department of Natural Resources".
- Page 35 Article 107.22(c). In the seventh line of the first paragraph change "Illinois Department of Conservation" to "Illinois Department of Natural Resources".
- Page 35 Article 107.22(c)(2). In the first line of the second paragraph change "Department of Conservation" to "Department of Natural Resources".
- Page 46 Article 108.04. In the fourth line of the first paragraph change "40 days" to "ten days".
- Page 81 Article 205.04(a). In the first line of the second paragraph change "0.5 sq m" to "0.2 sq m".
- Page 140 Article 301.05. In the second line of the first paragraph change "Type 8" to "Type B".
- Page 144 Article 302.08. In the first sentence of the second paragraph change "not than" to "not less than".

- Page 171 Article 312.31. In the seventh line of the second paragraph change “relative durability” to “minimum relative dynamic modulus of elasticity”.
- Page 185 Article 353.07. Change “420.10(g)” to “420.10(f)”.
- Page 246 Article 406.23. In the fifth and sixteenth lines of the fifth paragraph change “1102.01(a)(13)” to “1102.01(a)(9)”.
- Page 257 Article 420.02(d). Change “1050” to “1050.01, 1050.02”.
- Page 257 Article 420.02. Delete “(g) Preformed Elastomeric Compression Joint Seals for Concrete.....1053.01”.
- Page 338 Article 501.05. Revise the fifth paragraph to read “Removal of existing pipe culverts will be paid for at the contract unit price per meter (foot) for PIPE CULVERT REMOVAL, which price shall include any headwalls or aprons attached to the culvert.”
- Page 338 Article 501.05. Revise the sixth paragraph to read “Removal of existing slope wall will be paid for at the contract unit price per square meter (square yard) for SLOPE WALL REMOVAL.”
- Page 380 Article 504.06(c)(6). In the second and sixth lines of the fifth paragraph change “4 °C (40 °F)” to “22 °C (40 °F)”.
- Page 425 Article 506.04(d). In the first line of the first paragraph change “wither” to “either”.
- Page 490 Article 542.03, Table IB (English). In the fifth column change the eight occurrences of “0.07” to “0.079”, the seven occurrences of “0.10” to “0.109” and the four occurrences of “0.13” to “0.138”.
- Page 599 Articles 638.02(a) and 638.02(d). Change “1086” to “1085”.
- Page 635 Article 701.03. Revise the first paragraph to read: “**Equipment.** Equipment shall be according to the following articles of Section 1100 – Equipment:”.
- Page 650 Article 701.06(g). Delete the second paragraph.
- Page 652 Article 701.08(a). In the seventh line of the first paragraph change “401411” to “701411”.
- Page 661 Article 703.04. In the eighth line of the first paragraph change “four degrees” to “45 degrees”.

- Page 728 Article 816.03(a). Revise the first sentence of the first paragraph to read, "The unit duct shall be installed according to the NEC, directly from the reels on which the unit duct was shipped, in continuous spans from terminal to terminal without splicing the duct or cables."
- Page 730 Article 817.03. Revise the third sentence of the sixth paragraph to read, "The cable shall be installed in continuous spans between terminal points and splicing will only be permitted in pole handholes or junction boxes on bridge structures above grade."
- Page 734 Article 821.07. Revise the third paragraph to read, "The mounting shall provide the correct position of the luminaire as recommended by the manufacturer and shall be able to withstand assigned loading according to AASHTO. The sign lighting installation shall include all aluminum conduit, fittings, attachment hardware, cable and a disconnect switch with a lockable exterior handle mounted within reach from the walkway".
- Page 735 Article 825.01. In the second line of the first paragraph after "foundation," add "grounding".
- Page 738 Change "**SECTION 830. METAL POLES**" to "**SECTION 830. LIGHT POLES**".
- Page 745 Article 837.03(b). In the fourth line of the first paragraph change "503.07(a)" to "503.07".
- Page 774 Article 880.03. In the fourth line of the second paragraph change "optic all" to "optically".
- Page 786 Article 1001.06. Delete the second paragraph.
- Page 799 Article 1004.01(c). In notes 4/, 5/, and 6/, replace the four occurrences of " " with "±".
- Page 822 Article 1006.27(b). In the first line of the second paragraph change "ASTM F 669" to "ASTM F 1043".
- Page 847 Article 1009.05. Delete the last sentence of the first paragraph.
- Page 865 Article 1020.04. In the Class SI Concrete section of Table 1 add "Pile Encasement...512".
- Page 872 Article 1020.06. Revise the second paragraph to read, "When fly ash, ground granulated blast furnace slag, high-reactivity metakaolin, or microsilica are used as part of the cement in a concrete mix, the water/cement ratio will be based on the total cementitious material contained in the mixture."

- Page 932 Article 1067.01(a)(1). Revise the first paragraph to read, "The lamp socket shall be mogul type, glazed porcelain, one piece rolled threads with stationary socket lead connectors that will not move during lamp insertion and removal. It shall be provided with a grip or suitable device to hold the lamp against vibration. The rating of the socket shall exceed the lamp starting voltage, or starting pulse voltage rating."
- Page 933 Article 1067.01(a)(5)a. Delete the last two sentences of the sixth paragraph.
- Page 934 Article 1067.01(a)(5)b. Revise the fifth sentence of the third paragraph to read, "Proper ignition shall be provided over a range of -15 percent to +5 percent of rated voltage."
- Page 938 Article 1067.01(c)(1)a. In the first line of the second paragraph change "60 to 75 mm (2 3/8 to 3 in.)" to "50 to 60 mm (2 to 2 3/8 in.)".
- Page 945 Article 1067.01(f)(2)e. At the end of the first sentence of the first paragraph change "maximum voltage of 3,300 volts." to "rated voltage of 600 V.".
- Page 954 Article 1068.01(e)(2)h. In the third line of the first paragraph change "350" to "377", "520" to "560" in the fourth line and "illumination" to "illumination" in the fifth line.
- Page 960 Article 1069.01(b)(2)d. In the eleventh line of the first paragraph change "anit-sieze" to "anti-seize".
- Page 964 Article 1069.01(c)(1). In the fourth line of the second paragraph change "10" to "11".
- Page 967 Article 1069.01(c)(2)c.2. Revise the first sentence of the second paragraph to read "The davit arm shall have a 90 mm (3 1/2 in.) minimum inside diameter at the slip joint."
- Page 967 Article 1069.01(c)(2)c.2. In the fourth line of the second paragraph change "50 mm (2 in.)" to "60 mm (2 3/8 in.)".
- Page 969 Article 1069.01(c)(3)b.2. In the second line of the second paragraph revise "50 mm (2 in.)" to "60 mm (2 3/8 in.)".
- Page 972 Article 1069.01(e)(4). Revise the second sentence of the first paragraph to read, "Poles shall have a single piece shaft with a 250 mm (10 in.) minimum outside bottom diameter at groundline, tapering to a 130 mm (5 in.) minimum outside top diameter."
- Page 978 Article 1069.04(b). In the first line of the eighth paragraph change "door" to "pocket door".
- Page 981 Article 1069.04(d)(1). In the fourth line of the second paragraph change "Feferal" to "Federal".

- Page 981 Article 1069.04(d)(3). In the first line of the first paragraph change "Towrs" to "Towers".
- Page 988 Article 1070.01. In the chart after the first paragraph, change the references for both Helix Screw and Pilot Point from "ASTM A635" and "ASTM A575", respectively, to "AASHTO M 270M, Grade 250 (M270, Grade 36)".
- Page 988 Article 1070.02. Delete the second sentence of the first paragraph
- Page 988 Article 1070.02. Revise the first sentence of the second paragraph to read, "Nuts, washers and the entire length of the anchor rods shall be galvanized according to Article 1006.09."
- Page 1020 Article 1079.02. Change second subparagraph "(b)" to "(c)".
- Page 1048 Article 1086.01(a)(7). Add the following to the end of the first paragraph, "Where installed in a heavy salt spray environment, the enclosure shall be stainless steel."

CONCRETE MIX DESIGN CRITERIA (BDE)

Effective: August 1, 2001

Revise Table 1(Metric) of Article 1020.04 of the Standard Specifications as follows:

The "Min. Cement Factor kg/cu m" for Class SH concrete shall be 335(1)/360(2).

The "Max. Water/Cement Ratio kg/kg" for Class MS, SI, RR, SC, and SH concrete shall be 0.48 and for Class PV concrete shall be 0.42.

Revise Table 1(English) of Article 1020.04 of the Standard Specifications as follows:

The "Min. Cement Factor cwt/cu yd" for Class SH concrete shall be 5.65(1)/6.05(2).

The "Max. Water/Cement Ratio lb/lb" for Class MS, SI, RR, SC, and SH concrete shall be 0.48 and for Class PV concrete shall be 0.42.

Revise the last sentence of paragraph five of Article 1020.05(b) to read:

"A cement factor below 320 kg/cu m (5.35 hundredweight/cu yd) will not be permitted."

Revise the first sentence of paragraph four of Article 1021.03(c) to read:

"For Class MS, SI, RR, SC, and SH concrete, the water/cement ratio shall not exceed 0.44.

MATERIAL ALLOWANCES (BDE)

Effective: December 1, 2001

Revise the sixth paragraph of Article 109.07 of the Standard Specifications to read:

"In addition, payment may be made for materials prior to their use in the work. These material allowances may be paid at the discretion of the Department when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department. Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds \$10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under \$500,000, the minimum \$10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size. Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

80068

PLACEMENT OF ARROW BOARDS (BDE)

Effective: August 1, 2001

Add the following to Article 701.04 of the Standard Specifications:

- "(g) Arrow Boards. Arrow boards shown on standards or in the plans at the beginning of tapers, shall be placed at the beginning of the taper or in the closed lane within the first 90 m (300 ft) of the taper."

80056

BRIDGE DECK CONSTRUCTION (BDE)

Effective: April 1, 2002

Add the following to Article 503.03 of the Standard Specifications:

“(h) .Fogging Equipment..... 1103.17(k)”

Add the following after the second sentence of the ninth paragraph of Article 503.07 of the Standard Specifications:

“When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds, or for a period of time determined by the Engineer.”

Add the following after the first paragraph of Article 503.17 of the Standard Specifications:

“For the bridge deck pour, fogging equipment shall be in operation unless the evaporation rate is less than 0.5 kg/sq m/hour (0.1 lb/sq ft/hour) and the Engineer gives permission to turn off the equipment. The evaporation rate shall be determined according to the figure in the Portland Cement Association’s publication, “Design and Control of Concrete Mixtures” (refer to the section on plastic shrinkage cracking).

The fogging equipment shall be adjusted to adequately cover the entire width of the pour.

If there is a delay of more than ten minutes during bridge deck placement, wet burlap shall be used to protect the concrete until operations resume.

Concrete placement operations shall be coordinated to limit the distance between the point of concrete placement and concrete covered with cotton mats for curing. The distance shall not exceed 10.5 m (35 ft). For bridge deck widths greater than 15 m (50 ft), the distance shall not exceed 7.5 m (25 ft).”

Add the following to the end of the first paragraph of Article 503.17(b) of the Standard Specifications to read:

“The concrete in these areas shall be struck off during the deck pour and excess material from the finishing machine shall not be incorporated.”

In the “Index Table of Curing and Protection of Concrete Construction” of Article 1020.13 of the Standard Specifications, revise the curing method for deck construction to read “Article 1020.13(a)(5)”.

Add the following to Article 1020.13(a) of the Standard Specifications:

“(5) Wetted Cotton Mat Method. After the surface of concrete has been textured, it shall be covered immediately with dry cotton mats meeting the requirements of Article 1022.06. The cotton mats shall then be wetted immediately with a gentle spray of water. A foot bridge shall be used for these operations.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to prevent marring of the surface. Once the concrete has sufficiently hardened, soaker hoses shall be placed on top of the cotton mats and the cotton mats kept continuously wet for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets meeting the requirements of Articles 1022.04 and 1022.05 respectively.

For areas inaccessible to the cotton mats, curing shall be according to Article 1020.13(a)(3).”

Revise Article 1020.13(d)(3) of the Standard Specifications to read:

“(3) Bridge Decks. Bridge decks shall be cured according to Article 1020.13(a)(5) after the surface of the concrete has been textured according to Article 503.17(c)(4)a.

Protective coat shall be applied according to Article 503.19.

Add the following Article to Section 1022 of the Standard Specifications:

“**1022.06 Cotton Mats.** Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability. Cotton mats shall be free from tears and in good condition.”

Add the following after the first paragraph of Article 1103.17(a) of the Standard Specifications:

“For bridge decks with epoxy coated reinforcement, the vibrator shall have a non-metallic head. The head shall be coated by the manufacturer. The hardness of the non-metallic head shall be less than the hardness of, and cause no damage to, the epoxy coating. Slip-on covers will not be allowed.”

Add the following to Article 1103.17 of the Standard Specifications:

“(k) Fogging Equipment. Fogging equipment shall consist of a mechanically operated, pressurized system using a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete. The fogging equipment shall be mounted on either the finishing machine or a separate foot bridge. Controls shall be designed to vary the volume of water flow, be easily accessible and immediately shut off the water when in the off position. Hand held fogging equipment will not be allowed.”

MOBILIZATION (BDE)

Effective: January 1, 1999

Revised: November 1, 2000

This work shall consist of preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site for the establishment of offices, buildings and other facilities necessary for work on the projects and for all other work or operations which must be performed or costs incurred when beginning work on the project.

The amount which a Contractor will receive payment for, in accordance with the following schedule will be limited to six percent of the total contract bid. Should the bid for the item exceed six percent, the amount over six percent will not be paid until ninety percent of the adjusted contract value is earned.

Basis of Payment. Partial payment of the lump sum amount bid for Mobilization, not exceeding six percent, will be paid according to with the following schedule:

- (a) Upon execution of the contract, seventy-five percent of the pay item will be paid.
- (b) When ten percent of the original contract amount is earned, an additional fifteen percent of the pay item will be paid.
- (c) When ninety percent of the contract value is earned, the remaining ten percent of the pay item will be paid along with any amount bid in excess of the six percent limit.

Nothing herein shall be construed to limit or preclude partial payment for other items as provided for by the contract.

PORTLAND CEMENT CONCRETE PATCHING (BDE)

Effective: January 1, 2001

Revised: April 1, 2002

Revise Note 1 of Article 442.02 of the Standard Specifications, to read:

"Note 1. When patching ramp pavements and two lane pavements with two way traffic, Class PP-2, PP-3, or PP-4 concrete shall be used for Class A, Class B and Class C patching. For all other pavements, Class PP-1, PP-2, PP-3, or PP-4 concrete shall be used, at the Contractor's option, for Class A, Class B and Class C patching."

Add the following to Article 442.02 of the Standard Specifications:

"(I) Calcium Chloride (Note 5).....1013.01

Note 5. The calcium chloride accelerator shall be Type L (Liquid) with a minimum of 32.0 percent by mass (weight) of calcium chloride."

Revise the first paragraph of Article 442.06(e) of the Standard Specifications to read:

"(e) Concrete Placement. For Class A, Class B and Class C Patches, concrete shall be placed according to Article 420.07 and governed by the limitations set forth in Article 1020.14, except that the maximum temperature of the mixed concrete immediately before placing shall be 35 °C (96 °F), the required use of an approved retarding admixture when the plastic concrete reaches 30 °C (85 °F) shall not apply."

Revise the first paragraph of Article 442.06(h) of the Standard Specifications to read:

"(h) Curing and Protection. In addition to Article 1020.13, when the air temperature is less than 13 °C (55 °F), the Contractor shall cover the patch with minimum R12 insulation until opening strength is reached. Insulation is optional when the air temperature is 13 °C - 35 °C (55 °F - 96 °F). Insulation shall not be placed when the air temperature is greater than 35 °C (96 °F)."

Revise the second paragraph of Article 701.05(e)(1)d.1. of the Standard Specifications to read:

"No open holes, broken pavement, or partially filled holes shall remain overnight for bituminous patching or when the Department specifies only Class PP-2, PP-3, or PP-4 concrete be used. The only exception is conditions beyond the control of the Contractor."

Revise Article 701.05(e)(2)b. of the Standard Specifications to read:

- "b. Strength Tests. For patches constructed with Class PP-1, PP-2, PP-3, or PP-4 concrete, the pavement may be opened to traffic when test specimens cured with the patches have obtained a minimum flexural strength of 4150 kPa (600 psi) or a minimum compressive strength of 22,100 kPa (3200 psi) according to Article 1020.09.

For patches constructed with Class PP-2, PP-3, or PP-4 concrete which can obtain a minimum flexural strength of 4150 kPa (600 psi) or a minimum of compressive strength of 22,100 kPa (3200 psi) in 16 hours, the pavement may be opened to traffic at a lower opening strength. The specimens cured with the patches shall have obtained a minimum flexural strength of 2050 kPa (300 psi) or a minimum compressive strength of 11,000 kPa (1600 psi) according to Article 1020.09, to permit opening pavement to traffic.

With the approval of the Engineer, concrete strength may be determined according to AASHTO T 276. The strength-maturity relationship shall be developed from concrete which has an air content near the upper specification limit. The strength-maturity relationship shall be re-established if the mix design or materials are changed."

Revise Article 701.05(e)(2)c. of the Standard Specifications to read:

- "c. Construction Operations. For Class PP-2, PP-3, or PP-4 concrete used on ramp pavements and two lane pavements with two way traffic, or when the Department specifies only Class PP-2, PP-3, or PP-4 concrete be used for other pavements, Contractor construction operations shall be performed in a manner which allows the patches to be opened the same day and before nightfall. If patches are not opened before nightfall, the additional traffic control shall be at the Contractor's expense. Any time patches cannot be opened before nightfall, the Contractor shall change subsequent construction operations or the mix design. The changes shall be at no additional cost to the Department."

Revise Table 1 of Article 1020.04 of the Standard Specifications by replacing Class PP concrete with the following:

"TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA				
Class of Concrete	Use	Specification Section Reference	Cement Factor kg/cu m (cwt/cu yd)	Max. Water/Cement Ratio kg/kg (lb/lb)
PP-1	PCC Pavement Patching Bridge Deck Patching	442	Type I Cement 385 to 445 (6.50 to 7.50) Type III Cement 365 to 425 (6.20 to 7.20)	0.44

PP-2	PCC Pavement Patching Bridge Deck Patching	442	Type I Cement 435 (7.35)	0.38
PP-3	PCC Pavement Patching Bridge Deck Patching	442	Type III Cement 435 (7.35)	0.35
PP-4	PCC Pavement Patching Bridge Deck Patching	442	Rapid Hardening Cement 355 to 370 (6.00 to 6.25)	0.50

For PP-1, the Contractor has the option to replace the Type I Cement with Class C fly ash or ground granulated blast-furnace slag. The amount of cement replaced shall not exceed 15 percent by mass (weight), at a minimum replacement ratio of 1.5:1.

For PP-2, the Contractor has the option to replace the Type I cement with Class C fly ash or ground granulated blast-furnace slag. The amount of cement replaced shall not exceed 30 percent by mass (weight), at a minimum replacement ratio of 1:1.

For PP-3, in addition to the cement, 45kg (100 lb) of ground granulated blast-furnace slag and 23 kg (50 lb) of microsilica are required. For an air temperature greater than 30 °C (85 °F), the Contractor has the option to replace the Type III cement with Type I cement.

For PP-4, the cement shall be from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs".

TABLE 1. (CONT'D) CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA							
Class of Concrete	Slump, mm (in.)	Mix Design Compressive Strength, kPa (psi)		Mix Design Flexural Strength, kPa (psi)		Air Content, %	Coarse Aggregate Gradations Permitted
		Hours		Hours			
		12	48	12	48		
PP – 1	100 (4) Max	-----	22,100 (3200)	-----	4150 (600)	4.0 – 7.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 2	150 (6) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 3	100 (4) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 4	150 (6) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16

For PP-1, PP-2, PP-3 or PP-4; only CA-13, CA-14, or CA-16 may be used for bridge deck patching. In addition, the mix design strength at 48 hours shall be increased to 27,500 kPa (4,000 psi) compressive or 4,650 kPa (675 psi) flexural for bridge deck patching.

For PP-1, the slump may be increased to 150 mm (6 in.) Max if a high range water-reducing admixture is used.”

Revise the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. If the Department specifies a calcium chloride accelerator, it shall be a solution according to Article 442.02, Note 5.”

Replace the fourth paragraph of Article 1020.05(b) with the following seven paragraphs:

“At the Contractor’s option, admixtures other than air entraining agents may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum 18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete; a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F.) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has

the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg (100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer."

Revise the last paragraph of Article 1020.05(b) of the Standard Specifications to read:

"If a high range water-reducing admixture is used, the maximum slump given in Article 1020.04 may be increased according to Article 1021.03(c) for all classes of concrete, except Class PV, PP, and SC concrete."

Delete Article 1020.05(g) of the Standard Specifications.

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REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4 and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

- b. Employ convict labor for any purpose within the limits of

the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

- b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any

evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the

Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan

or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period).

The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V.

This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on /Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a

whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification,

distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of

any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled

"Certification Regarding Debarment, Suspension, Ineligibility

and Voluntary Exclusion-Lower Tier Covered Transaction,” provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the “Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs” (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “primary covered transaction,” “participant,” “person,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction,” without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

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